

## GEOMETRID DESCRIPTIONS AND NOTES.

BY LOUIS B. PROUT, F.E.S.

## SUBFAM. OENOCHROMINAE.

1. *Eumelea fumicosta antipnoa* subsp. n.

♂, 45–48 mm. Smaller than *f. fumicosta* Warr. (1896) from the Solomons, New Ireland, New Britain and New Hanover, less suffused with purple, notably in the subterminal area, where there is only a narrow, inconspicuous shade adjacent to the postmedian yellow spots; median line traceable, gently curved; the yellow apical spot of forewing less clear (more irrorated). Underside also distinguished by the developed median line.

♀, 50–53 mm. Smaller than *f. fumicosta*, rather lighter yellow, less coarsely irrorated; median shade strengthened, showing slight outward teeth on the veins; subterminal shade thin and weak except on  $R^2$ , where it forms a conspicuous spot or large dot. Underside with considerably less purple clouding than in *f. fumicosta*.

St. Matthias Island, June–July 1923, 4 ♂♂, 4 ♀♀, including the type. Squally Island, August 1923, 2 ♂♂, 2 ♀♀. All in Tring Museum, collected by A. F. Eichhorn.

The ♀ upperside is remarkably like an undersized *unipuncta* Warr. (1896), which—in spite of the great divergence in the ♂♂—seems to represent *fumigrisea* in New Guinea and the D'Entrecasteaux Islands.

2. *Eumelea ludovicata rhodeogyna* subsp. n.

♀. All the irroration, clouding and maculation strong, coloured *rosy-purple* (as in the ♂ forms), the sexual dimorphism consequently very much less pronounced than in the other races; the characteristic costal dots and spots of forewing remaining unaltered (blackish).

♂. Intermediate between name-typical ♂♂ and the uniform reddish subsp. *rubra* Prout of New Guinea, perhaps nearer to the latter.

New Ireland, November–December 1923, both sexes, including the ♀ holotype. New Hanover, February 1923, 3 ♂♂, 1 ♀. All in coll. Tring Mus. (A. F. Eichhorn).

3. *Alex longipecten amaura* subsp. n.

More reddish than *A. longipecten* Warr. (1905), from the Solomons, and much more strongly irrorated with purple-grey, the resultant tone nearly as in *continuaris* Walk. or even darker; only the costal area of the hindwing remaining (as in the allies) clear yellow.

New Ireland, November–December 1923, type and three paratypes; New Hanover, March 1923, 1 ♂. All in coll. Tring Mus., collected by A. F. Eichhorn.

One ab. shows remnants of the ochreous colour in the median area (only) of the forewing.

4. *Ozola macariata despica* subsp. n.

♂♀, 26-28 mm. Paler and less rufescent than *m. macariata* Walk. (*List Lep. Ins.* xxvi, 1637, Ceram), the irroration paler smoke-grey or drab-grey (less purple-grey), the lines weak, the median best developed, almost straight, the ♀ without the characteristic distal cloud of *m. macariata* ♀.

St. Matthias Island, June 1923 (A. F. Eichhorn), 3 ♂♂, 3 ♀♀ in coll. Tring Mus.

The same race occurs on Squally Island (3 ♂♂, 1 ♀, August 1923, A. F. Eichhorn), though the sole ♀ yet known shows a faint distal cloud reminiscent of that of *m. macariata*.

## SUBFAM. HEMITHEINAE.

5. *Terpna mölleri* (Warr.).

*Dindica mölleri* Warr., *Proc. Zool. Soc. Lond.* 1893, p. 349.

Warren's description was evidently founded on a mixture of two species which also remained mixed in Hampson (*Faun. Ind. Moths*, iii, 477, No. 4017). One specimen of each bears a label "*Dindica mölleri*" in Warren's handwriting, and no type was selected. One of them represents true *leopardinata* Moore (1867), which is on an average rather smaller than the other species, not quite so dark, the postmedian not quite so distally placed, the subterminal represented by a complete row of whitish spots (in the other species partly obsolete), accompanied proximally by a scarcely interrupted reddish shade, the hindwing with the first two submarginal black spots broadly confluent, the central spot on an average more elongate, the smoky suffusions of abdominal margin always strong and broad, both wings beneath more mixed with white in terminal area. Warren's mention of the submarginal whitish spots and of smoky abdominal "half" of hindwing must have arisen from his including 4 specimens (♂♂) of *leopardinata* in his series, but the name *mölleri* should be restricted to the majority of the series, not only because this conserves a name, but also on the ground of the following: (1) ♂ "♀"; (2) "much" darker; (3) hindmargin [i.e. termen] of hindwing "broadly blackish" [least inaccurate for some *mölleri*]; (4) "3 distinct roundish blotches," etc. [decisive].

6. *Agathia obnubilata libera* subsp. n.

♂, 40 mm.

*Forewing* with the dark grey markings not quite so brownish as in the other races; the border almost as ample as in *o. obnubilata* Warr. (1903), but with the green postdiscal band continuing narrowly to the hindmargin.——*Hindwing* nearly as in *o. obnubilata* except for the less brownish tone of the grey part.

*Underside* with the submarginal bands darker and more uniform than in the other races.

New Hanover, April 1923 (A. F. Eichhorn). Type in coll. Tring Mus.

7. *Uliocnemis elegans negligens* subsp. n.

Both wings with all the white markings extremely slender, the subterminal in particular almost obsolete. Hindwing with the apical patch slightly shortened, scarcely crossing R<sup>1</sup>.

St. Matthias Island, June–July 1923 (A. F. Eichhorn), 6 ♂♂ in coll. Tring Mus.

#### 8. *Dichorda porphyropis* sp. n.

♂, 37 mm. Head red-purple. Palpus a little darker, at base white; second joint aberrant in being tufted above and beneath, partly concealing the short third joint. Antenna pale buff, the first few joints deep purple; pectinations about 3. Thorax purple in front, then green, beneath white. Legs white; tibial tufts predominantly purple-black; hindtibia with the spurs approximated, a moderate terminal process.

*Forewing* bright green, in distal area clouded with white between SC<sup>1</sup> and SC<sup>2</sup>, and between R<sup>1</sup> and tornus; an irregular purple patch at base, mixed (especially in cell) with red-brown, extending along costal edge and again on M to antemedian line, much restricted posteriorly; antemedian line white, from one-third costa to two-fifths hindmargin, gently incurved between costa and cell-fold, rather more deeply between cell-fold and M, directed baseward for a short distance behind M, then rather oblique outward; this line finely edged distally with red-brown from costa to the last bend; a minute red-brown cell-dot; postmedian double, almost straight, slightly more oblique than termen, its proximal two-thirds yellow, its distal third pure white; a small reddish mark on costa proximally to this line.—*Hindwing* with termen strongly convex, fullest about R<sup>1</sup>–R<sup>2</sup>; M<sup>1</sup> almost as long-stalked as SC<sup>2</sup>; concolorous with forewing but with no purple or reddish markings; ill-defined white subbasal, apical and (large) tornal clouds; postmedian line central, coloured as on forewing.

Underside similar but more washed out.

Argentina: Misiones, March 23, 1922, type in coll. Tring Mus.

The palpus, the hindtibial process, the stalking of M<sup>1</sup> of hindwing and perhaps the femora (only the hind shows appreciable hairiness, but the others may be abraded) remove this from typical *Dichorda*, but the palpus, tufted foretibia, full hindwing and the pattern bring it into this rather than into *Phrudocentra*—the other nearest genus. Perhaps it should be made the type of a new genus.

#### 9. *Chrysochloroma electrica herbida* subsp. n.

♂, 39–40 mm. Rather smaller than *e. electrica* Warr. (1896). Ground-colour much less bluish (grass-green rather than terre-verte), the pale postmedian line thinner, whiter; cell-dot of hindwing less elongate; terminal line less thickened, this and the fringes lighter, more reddish, the fringes traversed by a paler (sometimes nearly white) line.

♀, 40–42 mm. Quite like that of *meeki malthaca* Prout (Nov. Zool., xxiii, 205, St. Aignan); almost as light and bright as *megaloptera* Lower (1894, Queensland), to which also it bears a very close resemblance, except in the more ex-curved postmedian line of the hindwing; hindwing wanting the apical patch of *e. electrica* ♀ and with only an extremely limited red suffusion round the cell-dot.

St. Matthias Island, June 1923 (A. F. Eichhorn), 4 ♂♂, 2 ♀♀, in coll. Tring Mus.

The relation between the supposed species *electrica* and *meeki* Warr. (1896) is at present problematical. They may easily be forms of a single species, but the undersides are constant to the two types; *meeki* is known to me from the

Trobriand Islands (name-type) and in smaller forms from the Louisiades (*m. malthaca*), New Hanover and Squally Island (perhaps worthy of names); *electrica electrica* from Ron Island (name-type), the coasts of New Guinea and perhaps Dampier Island (only 3 ♀♀ yet known from there), a transitional form towards *e. herbida* from Vulcan Island.

#### 10. *Thalassodes javensis* sp. n.

♂, 38 mm. Face green. Palpus  $1\frac{1}{3}$ , with terminal joint short; green above, white beneath. Vertex white; occiput green. Antennal pectinations tinged with green. Thorax and abdomen green above, white beneath. Hindtibia not dilated.

*Forewing*, as in the allies, green with fine, short, whitish strigulae and with the costal edge narrowly buff; antemedian line obsolescent; postmedian weak, indicated chiefly by white dots on the veins, almost straight from  $SC^6$  at about 7 mm. from termen to  $SM^2$  at about 5 mm. from termen, the hindmost dot the strongest; termen with some extremely minute blackish irroration, condensing into noticeable (though extremely small) black dots at the veins; fringe pale buff, tipped with grey.—*Hindwing* slightly narrower than in the *quadraria* group, inclining towards the shape of *immissaria* Walk., etc.; postmedian line punctiform, as weak as on forewing; termen and fringe as on forewing.

Underside whitish green.

W. Java: Buitenzorg, type in coll. Tring Mus., 1 paratype, 800 ft., at light, April 17, 1923 (H. M. Pendlebury), in coll. Fed. Malay States Mus. "Java" (C. W. Andrews), paratype in coll. Brit. Mus.

I detected the British Museum example among *immissaria* (from which it differs structurally in the non-dilated hindtibia) when working at Wytsman's "Genera Insectorum," a good many years ago, but refrained from describing it, as it had damaged palpi.

#### 11. *Thalassodes leucoceraea* sp. n.

♂♀, 45–47 mm. Face green. Palpus in ♂  $1\frac{1}{2}$ , with third joint moderate, in ♀ slightly over 2, with third joint long; green, beneath white. Thorax and abdomen green above, white beneath. Hindtibia of ♂ not dilated.

*Forewing* rather dull bluish green, not very opaquely scaled, with scattered white irroration or minute strigulation; costal edge buff; lines obsolete, only a very faintly indicated deeper green (i.e. less irrorated) shade marking what—by analogy with many *Hemitheinae*—must be the proximal boundary of the postmedian; fringe reddish brown; terminal line very slightly darker than the fringe, occasionally developing slightly blacker dots at veins.—*Hindwing* fairly broad, the angle at  $R^3$  obtuse; as forewing, but with a conspicuous, slightly raised white mark along  $DC^3$ , recalling *Eretmopus marinaria* Guen., in which, however, it is shorter, more punctiform (Guenée's description and Oberthür's figure ignore it—probably the type is worn).

Underside whitish green, the fringes slightly paler brownish than above.

Malay Peninsula: Kedah Peak, 3,200 ft., December 1915. Type in coll. Brit. Mus., kindly presented by the Federated Malay States Museum; other examples in coll. Fed. Malay States Mus., coll. Raffles Mus., coll. L. B. Prout.



12. *Prasinocyma eichhorni* sp. n.

♀, 42 mm. Face green. Palpus about 2, third joint as long as second; green above, white beneath. Vertex and base of antenna white; occiput green. Thorax and abdomen above green, with a bright yellow-ochre central line on methathorax and abdomen, becoming posteriorly weaker and more mixed with white; beneath whitish green. Legs whitish, tinged with green.

*Forewing* with apex rather acute, termen very faintly sinuous, moderately oblique; SC<sup>1</sup> free, R<sup>1</sup> stalked, DC incurved in middle, M<sup>1</sup> connate; slightly diaphanous bluish green; costal edge pale buff, finely underlined with a fleshy tinge; cell-mark olive yellowish, slightly elongate; lines white, bordered in median area with olive yellowish; antemedian at 5 mm., lunulate-dentate, the vein-teeth directed proximad; postmedian from costa at 12 mm. to hindmargin at 9 mm., more deeply lunulate-dentate, with slight incurvature between radials and at submedian fold; termen with an extremely fine reddish-grey line, which is accentuated at the veins; fringe pale buff.—*Hindwing* angled at R<sup>3</sup>; DC oblique, M<sup>1</sup> stalked; as forewing, the postmedian line more protuberant at R<sup>3</sup>-M<sup>1</sup>.

Underside whitish green, with the markings scarcely discernible.

New Ireland, February 1924 (A. F. Eichhorn), type in coll. Tring Mus.

13. *Prasinocyma absimilis semimacula* subsp. n.

♂♀. Differs from *a. absimilis* Warr. (1901) in having the white spot on hindmargin of forewing reduced to a comma-shaped dot, the head of the comma on SM<sup>2</sup>, the tail behind.

New Ireland, November 1923–February 1924, 3 ♂♂, 1 ♀ (A. F. Eichhorn), in coll. Tring Mus.

Warren's type from Etna Bay was a rather rubbed ♀ with discoloured abdomen (thus not showing the white dorsal dots), and has not yet been matched from New Guinea, but since the same form (so far as can be judged) has been taken on Ceram and Buru it is evidently widely distributed, and I conclude that it is safe to regard the present as a local race. The ♂ shows characteristic dense whitish hairy clothing on the posterior part of the abdomen ventrally and laterally, the anal tuft rather well developed.

14. *Comostola nereidaria levata* subsp. n.

♀, 21–22 mm. Crown not, or only extremely narrowly, white in front.—*Forewing* with cell-spot much reduced in size; postmedian spot of hindmargin less marked with red than in *n. nereidaria* Snell. (1881); terminal yellow line with much smaller dark spots between the veins.—*Hindwing* with similar distinctions, the reduction of the angular cell-mark giving it quite a different aspect from that of *n. nereidaria*.

St. Matthias Island, June 1923 (type); Squally Island, August 1923; all in coll. Tring Mus., collected by A. F. Eichhorn.

The examples are not of such a bluish green as the majority of *n. nereidaria*, but aberrations of that race closely resemble *n. levata* in tone.

15. *Eucrostes euryxantha* sp. n.

♂♀, 14–17 mm. Face orange, mixed above with red. Palpus with terminal joint moderate; whitish buff, mixed with red. Crown green. Fillet white.

Antennal pectinations in ♂ about 3, in ♀ about 2. Thorax and abdomen above green, beneath whitish green. Legs pale, the foreleg strongly, the midleg moderately marked with red or reddish.

*Forewing* with apex slightly more rounded than in the allies; of the same bright green, or slightly more yellowish; costal edge red; cell-dot red, minute; a yellow band of about 1 mm. width proximal to the red terminal line; the latter somewhat suffused with purple-grey, produced proximally into sharp interneural triangles; fringe red.—*Hindwing* the same, except costal edge.

Underside similar, the red costal edge of forewing broader, at least proximally.

St. Matthias Island, July 1923, 2 ♂♂, 3 ♀♀, including the type; Squally Island, August 1923, 1 ♂, 1 ♀; all in Tring Mus., collected by A. F. Eichhorn.

#### 16. *Acidaliastis porphyretica* sp. n.

♂, 12–15 mm.; ♀, 13–18 mm. Face and palpus rosy. Vertex and antennal shaft white; occiput rosy. Thorax and abdomen above rosy, the abdomen with small whitish mediodorsal spots; beneath whitish yellow; the first two pairs of legs with rosy suffusion.

*Forewing* bright rosy with purple suffusion (recalling many *Ptochophyle* and *Chrysocraspeda*, e.g. *togata* Fb. ♀), more or less irrorated with whitish; costal edge in some examples darkened, in others more tinged with olivaceous; cell-spot whitish, rarely conspicuous; lines yellowish white, generally slender; ante-median from about one-third costa to two-fifths hindmargin, generally obsolete at costa, oblique outward anteriorly, bent or angled at cell-fold, then slightly oblique inward, with an inward curve between M and SM<sup>2</sup>; postmedian anteriorly rather less oblique than termen, slightly tremulous, then sinuous (excurved between R<sup>1</sup> and M<sup>2</sup>, incurved between M<sup>2</sup> and SM<sup>2</sup>); terminal line purple; fringe pale yellowish, in proximal part overlaid with rose-colour.—*Hindwing* concolorous or slightly more mixed with whitish; indications of a whitish cell-spot; a postmedian line as on forewing; fringe as on forewing.

Forewing beneath paler rosy, almost unmarked; hindwing whitish, with variable rosy suffusion, sometimes developing a rosy postmedian line, always a rosy terminal; fringe yellowish.

N.E. Madagascar: Diego Suarez, a long series; Sakaramy, 1 ♂ (G. Melou). Type in coll. Tring Mus.

Rather variable, but recognisable at a glance by the rosy coloration; otherwise near *prophanes* Prout (*Ann. Transv. Mus.* viii. 154), agreeing in structure. Some specimens show whitish rays in the terminal area.

#### SUBFAM. STERRHINAE.

#### 17. *Anisodes minorata vinotincta* subsp. n.

♂♀, 25–28 mm. Differs from *m. minorata* Warr. (Nov. Zool. iv. 48 = *ephyrata* Warr., Nov. Zool. iv. 60, Tcnimber) in having the ground-colour strongly suffused with deep vinaceous (slightly rufous), the dark median band somewhat broadened and an additional dark band generally more or less strongly developed outside the postmedian dots, containing a series of subterminal spots of the ground-colour.

St. Matthias Island, June 1923 (A. F. Eichhorn), 5 ♂♂, 3 ♀♀ in coll. Tring Mus.

*A. tribeles* Prout (Nov. Zool. xxvii. 276, Sudest) proves to be another race of *minorata*, the ground-colour intermediate, the markings not noticeably stronger than in *m. minorata*. I should scarcely have described it had I not overlooked its association with *minorata*, which Warren founded on a broken ♂ and placed in *Brachycola*. The separation of other races (China, Formosa, Key Islands, etc.) must await better material. Like several other *Anisodes*, it seems to be distributed over the greater part of the Indo-Australian Region.

#### 18. *Anisodes tricrista* sp. n.

♂, 28–30 mm. Face deep chocolate above, whitish below. Palpus scarcely  $1\frac{1}{2}$ , terminal joint nearly one-half second; liver-brown above, pale cream beneath. Vertex and antennal shaft pale, collar buff. Thorax and base of abdomen above fawn-colour with a purplish tinge; the rest of abdomen pale crown. Legs pale, the fore and middle femora and tibiae reddened on upper and inner sides. Hind-tibia with three spurs, the proximal well separated from the distal pair.

*Forewing* with costa straightish, apex rather acute, termen oblique, little curved; areole wanting; an area of fine, closely appressed, transverse hair-scaling in and behind cell; three raised tufts on the veins near apex, that on  $R^1$  very small, that on  $SC^2$  larger, that on  $SC^{3+4}$  larger still; fawn-colour, with fine purplish irroration; the sexual patches light brown or (at least the subapical tufts) inclining to clay-yellowish; cell-dot minute, black; principal lines obsolete or (in the type) the antemedian indicated by dots on SC and  $SM^2$ ; a faintly pale subterminal line, marked proximally by a rather inconspicuous series of minute black dots, the first three placed on the crests proximally, the next three nearest to the termen, the last two receding slightly; equally minute interneural dots at termen.—*Hindwing* with termen very feebly subcrenulate, appreciably bent in middle; concolorous with forewing, without sex-patches; markings otherwise as in forewing; a faint median shade outside cell-dot, a second faint shade inside subterminal series.

Underside rather paler; forewing with costal margin ochraceous and with a slight smoky suffusion in and for some distance beyond cell; both wings with minute cell-dot and terminal dots; hindwing with costal edge, etc., tinged with ochraceous.

New Ireland, November 1923, 3 ♂♂ (A. F. Eichhorn), type in coll. Tring Mus.

#### 19. *Anisodes matthias* sp. n.

♂♀, 29 mm. Close to *niveopuncta* Warr. (1897), perhaps a subspecies. Rather smaller, the forewing perhaps slightly broader in proportion. Ground-colour less fleshy, with the dark irroration stronger, on the hindwing tending to condense into a vague, narrow band proximally to the subterminal; median shade, at least on forewing, a little broadened; postmedian dots enlarged. Underside of forewing almost or altogether without the pink suffusion of *niveopuncta*.

St. Matthias Island, June–July 1923 (A. F. Eichhorn), 2 ♂♂, 2 ♀♀, in coll. Tring Mus.

#### 20. *Problepsis appollinaria deparcata* subsp. n.

♂♀, 36–37 mm. Fillet between the antennae less blackened than in the other races. Wings purer white; the silvery ocelli entirely unaccompanied by

dark markings; antemedian line obsolete; median shade very faintly greyish; postmedian rather thinner and weaker than in typical *appollinaria* Guen. (1858); subterminal spots and line indistinct.

St. Matthias Island, July 1923, type ♂ and 1 ♀; June 1923, 4 ♀♀ (A. F. Eichhorn). All in coll. Tring Mus.

## 21. *Somatina maeandrata* sp. n.

♀, 31 mm. Face black. Palpus rather slender, little over 1; blackish, pale beneath. Head and body pale fleshy grey, here and there with deeper admixture; abdomen dorsally with some blackish irroration.

*Forewing* with  $SC^2$  connate with  $SC^3$  (type) or from cell (paratype); pale fleshy grey, irrorated and clouded with deeper fleshy brownish, the ground-colour remaining clearer costally and in the region of the two lines; very sparse black irroration; a black cell-dot; lines brown, the postmedian blackened on the veins; antemedian slender, weak, slightly sinuous; postmedian at least as distally placed as in *anthophilata* Guen., waved, angled outward at  $R^1$ , deeply incurved at both folds; subterminal almost obsolete, with faint dark shading proximally and—except at apex—distally; terminal dark line fine and weak; fringe dark red-grey.—*Hindwing* similar, but with the cell-dot weaker, the antemedian line obsolete.

Underside paler; postmedian line faintly indicated; costal margin of forewing tinged with ochreous; fringes reddish.

Malay Peninsula: Kedah Peak, 3,200 ft., December 1915. Type in coll. Brit. Mus., kindly presented by the Raffles Museum; paratype in coll. Raffles Mus.

Except in *rosacea* Swinh., in which, as in the new species, its point of origin varies,  $SC^2$  of the forewing seems always to be stalked in the typical group of *Somatina*; *maeandrata* is evidently nearer to *plynusaria* Walk. than to *rosacea*; at first glance it rather suggests a small washed-out *urnaria* Guen.

## 22. *Sterrha indepressa* sp. n.

♂♀, 21–22 mm. Face black. Palpus black on upper and outer sides. Vertex whitish. Antennal joints not projecting; ciliation in ♂ about 1, in ♀ vestigial. Collar light brown. Hindtibia of ♂ dilated, with strong pale hair-pencils, the tarsus minute.

*Forewing* of average breadth, apex moderately sharp, termen straightish; areole moderate,  $SC^1$  stalked just beyond; whitish bone-colour, mostly with rather darker, greyer suffusion, leaving clear a band between median and postmedian, as well as the subterminal line; lines darker brown-grey; antemedian fine, excurved in anterior half, minutely incurved in submedian area; median shade just beyond the black cell-dot, not sharply defined proximally, distally scarcely sinuous; postmedian nearly parallel with termen, at 2 or 2.5 mm. therefrom, minutely crenulate, the outward points on the veins very slightly darkened; distal area, by contrast to the pale band, suggesting a rather definite dark border, as in *palniensis* Prout or weakly marked *diffluata* H.-Sch., the subterminal formed as in the latter or slightly thinner; termen without dark marks; fringe rather long, with minute dark dots at vein-ends.—*Hindwing* with termen strongly convex, slightly waved, rather prominent about  $R^2-M^1$ ;  $SC^2-R^1$  stalked



to rather more than one-half ; proximal part hardly suffused, median line (shade) just proximal to the minute black cell-dot, little sinuous ; band beyond clear, as on forewing ; postmedian gently incurved between radials and at fold ; distal area as on forewing.

Forewing beneath with heavy smoky suffusion as far as the median line, thence nearly as above but with the postmedian darker. Hindwing slightly paler than above, the median shade slender, the terminal shades tending to obsolescence. Both wings with minute black cell-dot.

Darjiling, apparently not uncommon, the type ♂ (August 1904) in coll. Tring Mus.

Mr. Warren and the British Museum had this determined as "*indeterminata* Warr." (Nov. Zool. viii. 25, Simla), which is a quite *weakly* marked species—notably beneath. The new species has more in common with *palniensis* Prout (Nov. Zool. xxvii. 311, Palnis), which is a greyer, rougher-looking insect.

#### SUBFAM. LARENTIINAE.

#### 23. *Xanthorhoë hampsoni* sp. n.

"*Cidaria curcumata* Moore" (part.) Hmps., *Faun. Ind. Moths*, iii. 365 (1895) (ex err.).

♂, 33 mm. Head and body dirty greenish, mixed with brown-black. Palpus 1½. Antennal pectinations 1½ (surmounted with fascicles ½ as long as the pectinations), with short intermediate fascicle-bearing processes (i.e. much as in *griseiviridis* Hmps. but with the pectinations longer).

*Forewing* glossy green ; veins in places pale ; basal and median areas dark brown, mixed with black and very slightly in places with vinous and edged by fine whitish lines ; edge of basal area almost straight ; succeeding green area with lines and blotches of black ; antemedian line bent or bluntly angled in cell and weakly toothed outward on fold (not "vein 2" as in Hampson) ; cell-spot black, generally large ; an irregular row of blackish blotches beyond it ; postmedian sinuate inward between the radials, bilobed behind (not "on") R<sup>1</sup>, the projections not quite so long as in *griseiviridis* ; the green area beyond traversed by interrupted lines and shading off into brown terminally ; subterminal line scarcely lunulate, in places interrupted, crossed by an oblique dash from apex ; proximally to it a dark costal patch (crossing SC<sup>2</sup>) and a pair of broad black wedge-marks between the radials, distally to it some dark maculation between apical dash and R<sup>1</sup> ; terminal line rather thick but not intense, slightly interrupted at and midway between the veins ; fringe weakly chequered, with a fine pale line at base. —*Hindwing* glossy white ; smoky posterior suffusion, slightly interrupted by white postmedian and subterminal lines ; a small weak cell-dot ; a dusky terminal line, strongest posteriorly ; fringe weakly mottled or chequered.

Underside whitish, with slightly elongate cell-marks and sinuous dark-grey postmedian line ; forewing suffused with light grey as far as postmedian and again terminally, with indications of a white subterminal ; hindwing with faint grey shading proximally to the subterminal.

India : Simla, June 1896, type in coll. Tring Mus. Also Simla (1 ♂, 1 ♀) and Dalhousie (1 ♂, 1 ♀) in coll. Brit. Mus., forming the major part of Hampson's conception of *curcumata* (cf. Prout, *Ent. Mitt. Deutsch. Ent. Mus.* iii. 246), though he had also 2 ♀♀ of true *curcumata*.

24. *Xanthorhoë placida* sp. n.

♂♀, 32–38 mm. Very near the preceding, perhaps representing it in N.E. India. Structure about the same, the secondary processes of the ♂ antenna apparently more developed.

*Forewing* green, with black-brown markings, the latter more or less mixed in places with red, particularly at base of costa, on the end of M and on the bases of R<sup>s</sup>, M<sup>1</sup> and M<sup>2</sup>; all the areas except terminal with indistinct wavy lines, but without the spots and blotches of *hampsoni* (except in some specimens behind the proximal part of M<sup>2</sup>); median band rather narrower than in that species; postmedian much more direct, the radial sinus scarcely noticeable, the double lobe behind it quite small; markings of distal area about as in *hampsoni* or with the suffusion of posterior part rather darker and more extended.

Underside distinguished at a glance from that of *hampsoni* by the much less sinuous postmedian line on both wings.

Bhután: Buxa, 3 ♂♂, 2 ♀♀ (including the type ♂); Sikkim, 1 ♂, 6 ♀♀; Naga Hills, 2 ♀♀; all in coll. Tring Mus. N.E. Burma: Htawgaw, 6,000 ft., October 14, 1923 (Capt. A. E. Swann), 1 ♀ in coll. L. B. Prout.

Except for the whiter hindwing and underside, the ♀ would be difficult to distinguish from some forms of *curcumata* Moore.

25. *Lasiophanes scotobathra* sp. n.

♂, 25–26 mm. Face mixed blackish and white-grey. Palpus above predominantly blackish, beneath white-grey. Vertex blackish. Thorax and abdomen above blackish, beneath with a tinge of brown, the extremity of abdomen remaining black.

*Forewing* moderately elongate, termen relatively short, less oblique than in *rufisticta* Warr. (Nov. Zool. xii. 333); areole undivided; M<sup>2</sup> slightly more distal at its origin than in *rufisticta*, a little curved; glossy light brown, slightly mottled with fuscous; proximal area (about to origin of M<sup>2</sup>) blackish, slightly pale-mixed towards base, bounded distally by a broad whitish line, which is rather strongly excurved in cell and moderately in submedian area, bluntly angled inward at M and SM<sup>2</sup>; a faint dark thread indicated at distal edge of the white, absorbing the obsolescent, crescentic cell-mark; postmedian in anterior half well-developed and strongly excurved, in posterior obsolescent, lunulate-dentate, the strongest tooth inward on M<sup>2</sup>; faint wavy lines indicated on the area between the antemedian and postmedian and faint subterminal "twin spots" between the radials; terminal line interrupted with pale dot, at the veins; fringe pale, with faint grey bisecting lines and with dark-grey spots opposite the veins.—*Hindwing* slightly ampler than in *rufisticta*; DC not biangulate, posteriorly strongly oblique, R<sup>s</sup> central; black-grey, the posterior hair black, deeper than in *rufisticta*, much more extended than in *nigranalis* Prout (1910).

Forewing beneath greyer than above, the markings weakly indicated. Hindwing pale grey, with fuscous lines, the antemedian curved, the postmedian strongly outbent in middle, two or three fine wavy lines weakly indicated in the median area.

Peru: Huancabamba, Cerro de Pasco (E. Boettger), 2 ♂♂ in coll. Tring Mus.

On revision this species and the following will probably have to be removed from *Lasiophanes*, the venational differences being by no means insignificant.

26. *Lasiophanes aoroptila* sp. n.

♂, 28 mm. Structure (except as noted) and general coloration much as in the preceding species. Antenna minutely ciliated (ciliation less than  $\frac{1}{2}$ ). Anal extremity not blackened.

*Forewing* with termen extremely oblique posteriorly, tornus not defined, hindmargin a little prominent in middle; underside with an oval patch of androconial scaling behind posterior part of M and base of  $R^1$ , and just crossing into the cell; more uniformly irrorated with fuscous than *scotobathra* Prout (supra), leaving a clear brown subapical patch, reminiscent of *Anthalma*, *Phlebosphales*, etc.; proximal area not blackened, only separated from median area by a normally placed, vaguely double, whitish antemedian; discal crescentic mark rather thick; a slaty patch behind it, indicating position of androconial patch. — *Hindwing* rather roundly produced about  $SC^2-R^1$ , thence little rounded to tornus; DC strongly curved, becoming oblique posteriorly; glossy grey, with a darker grey androconial patch between the radials from DC outward (obviously meeting that of forewing when the latter is folded back); tuft at anal angle more brownish, restricted about as in *nigranalis* Prout.

Forewing beneath drab-grey, paler at apex and termen, slightly darker and browner on the androconial patch. Hindwing pale grey, weakly irrorated; a dark mark on  $DC^2$ ; a lunulate-dentate postmedian line, not very strong and not reaching costa; very faint indications of a few other lines.

Peru: Huancabamba, Cerro de Pasco (E. Boettger). Type in coll. Tring Mus.

27. *Collix haploscelis* sp. n.

♂, 33–34 mm. Face with loose cone; blackish. Palpus fully 2; first joint white, with loose black hair at end; second ochreous, with projecting hair above and strong black tuft beneath, projecting along the third joint; third long and slender, black, above whitish. Antenna nearly simple. Vertex blackish, with a pale spot in front. Thorax and abdomen concolorous with wings, the patagia and tegulae marked with ochreous, the abdomen (to about the fifth somite) with an ochreous (almost orange-rufous) lateral stripe; lateral tufts well developed, pale greyish. Midtibia not (as in all other ♂♂ of true *Collix*) dilated.

Wings coloured and marked much as in dark *hypospilata* Guen., or a little more uniform; forewing with the vein-dashes on the lines short and inconspicuous, subterminal line broken into small white dots, the one behind  $M^2$  slightly larger; hindwing with the termen not very deeply dentate, the cell-dot fairly large.

Underside less tinged with brown than in *hypospilata*, but with some fuscous longitudinal streaks between base and postmedian, particularly along M (broadening to fill in the interspace of  $R^1$  and  $M^1$ ) and  $M^2$ ; postmedian band more irregular than in *hypospilata*, somewhat elbowed at  $R^1$  and  $R^2$ ; a weaker band in place of the subterminal spots of *hypospilata*.

New Hanover, March–April 1923 (A. F. Eichhorn), 2 ♂♂ in coll. Tring Mus.

28. *Collix purpurilita* sp. n.

♂♀, 32 mm. General coloration (except as noted) as in the preceding species. Frontal cone scarcely developed. Palpus in ♀ not quite 2, in ♂ rather

shorter; second joint with moderately appressed scaling, black beneath, ochreous above; third joint rather short and blunt, ochreous. Patagia and tegulae less brightly marked than in *haploscelis*. Midtibia of ♂ dilated. Lateral stripe of abdomen bright.

*Forewing* with stronger purple-grey gloss than in *hypospilata*; cell-spot nearly twice as broad posteriorly as anteriorly; lines well marked, especially the subbasal, the antemedian and the postmedian; the first two angled outward on C, M and SM<sup>2</sup>, thickened at the angles, the antemedian touching the base of M<sup>2</sup>; postmedian denticulate, much as in *stellata* Warr. (Nov. Zool. i. 679); subterminal broken into white dots.—*Hindwing* with termen strongly convex, the teeth rather strong; markings much as in *stellata*, the cell-dot a little larger, the postmedian more excurved.

Underside much as in *stellata*, the postmedian submacular band rather more bent in middle, the subterminal band weak.

Solomons: Rendova, February 1904 (A. S. Meek). Type in coll. Tring Mus.

### 29. *Rhinoprora oribates* sp. n.

♂♀, 26 mm. Close to *palpata* Walk. (1862). Larger. Head and palpus darker, predominantly black-brown.

*Forewing* darker and more glossy than in *palpata*, the green shades almost suppressed except in the lines which bound the basal patch and the broad median band; these lines narrowed, the pair beyond the postmedian inclined to be interrupted behind R<sup>1</sup>; cell-spot enlarged, elongate, extending the whole length of DC<sup>2-3</sup>; course of postmedian rather less irregular than in *palpata*; subterminal weak, more or less interrupted or broken into interneural dots, its proximal dark shade forming a pretty continuous band.—*Hindwing* rather more glossy and more smoky than in *palpata*, weakly marked.

Java: Mount Gedeh, June 24, 1910 (type ♂), June 15, 1910, at 8,000 ft. (allotype ♀). In coll. L. B. Prout, collected by Dr. E. A. Cockayne, to whose generosity I am indebted for them.

Still larger specimens, unfortunately wasted, were found by Mr. C. L. Collette on the summit of the same mountain, 9,000 ft., April 21, 1922, perhaps representing a different brood.

### 30. *Antimimistis subteracta* sp. n.

♀, 22–24 mm. Hindtibia with four spurs. Otherwise extremely like *A. attenuata* Moore (1887), especially on the upperside. Head and palpus slightly more mixed with reddish.

*Forewing* slightly darker or more uniform, of a slightly more reddish brown, the markings not very sharply expressed; subterminal line obsolescent, excepting the central spot, which is hardly so white as that of *attenuata*.—*Hindwing* concolorous, a pale mark at abdominal margin just beyond the postmedian rather sharply differentiated; the central subterminal spot rather less concise and more yellowish than in *attenuata*.

Underside distinguishable at a glance from that of *attenuata*, being more black-grey (less brown), with much more sharply defined whitish lines, the postmedian broadened into a narrow band and more regularly curved than in *attenuata*.



N. India : Khasia Hills, March 1894, type and another ♀; Darjiling, August 1904, 1 ♀; all in coll. Tring Mus.

A ♂ from the Khasia Hills, May 1897, in good condition but unfortunately without hindlegs (therefore not made the type), is smaller (19 mm.), but otherwise like the ♀♀; it will be very interesting to ascertain whether this sex agrees in hindtibial armature with its ♀ or with the other *Antimimistis* species. As regards the genus, recently erected by Turner (*Tr. Roy. Soc. S. Austral.* xlv. 233) for a closely allied Australian species, it is curious that no author noticed its salient feature in the well-known *attenuata*, the remarkable long-stalking of  $R^{2+3}$  of the forewing being, of course, observable with a very moderate lens.

### 31. *Phthonoloba auxostira* sp. n.

♂, 34–41 mm. Hitherto confounded with *decussata* Moore (1867); distinguished as follows:

Palpus smoother above, green almost to end of second joint (without the projecting black-brown scaling of *decussata*). Abdomen of ♂ with the "keel"<sup>1</sup> larger, reaching fully to the middle of the third abdominal segment (in *decussata* only just reaching this segment); tergites 1, 7 and 8 green, some green also on tergite 6 (in *decussata* only 1 and 8 green, or the green admixture on [6 and] 7 almost negligible). Femoro-tibial pencil denser than in *decussata*. Forewing slightly less vivid green. Hindwing slightly darker or more uniform (not becoming pale at costal margin).

South and Central India: Madura dist., March–June 1906, 3 ♂♂ (type), 1 ♀ (H. Campbell); Peermaad, Travancore; Nilgiris; Shevaroy Hills; Cud-dapah; Gooty. Type in coll. Tring Mus.

### 32. *Phthonoloba titanis* sp. n.

♀, 53 mm. Far larger than the type species and indeed every hitherto known species of the group except *praeëminens* Prout (1916). Palpus almost 3, second joint somewhat rough-scaled above, third joint elongate. Head and thorax almost certainly of a paler, less bright green than in *decussata* and *auxostira* (rather faded). Abdomen dorsally tinged with green at the base, otherwise pale greyish or brownish.

*Forewing* with apex slightly more acute than in *decussata*, termen not quite so regularly curved, being a little straighter anteriorly; apparently of a paler, more olivaceous green, but discoloured; markings similarly brown (rather more spotted with black); cell-spot large, black; subbasal line more black-mixed than in *decussata*, thinner; succeeding group of lines angled subcostally; median band (group of lines) broader anteriorly than posteriorly, the lines immediately beyond cell-spot more strongly excurved, the second and third spotted on the veins; subterminal group somewhat as in *decussata*, the true (pale) subterminal rather better expressed; marked distally with black vein-spots, that on  $SC^*$  enlarged, subtriangular; termen with paired dots at the veins.—*Hindwing* paler, greyish, becoming more brownish distally; cell-spot rather large; a

<sup>1</sup> Noticed by Warren in the allied genus *Steirophora*, with its offshoots (? subgenera) *Synneurodes* and *Episteira*, but apparently altogether overlooked in *Phthonoloba* and (? subgenus) *Hypocometa*. It should be stated that "long second segment" in Warren's original diagnosis of *Steirophora* is a lapse for "third segment." In *Phthonoloba* the process is shorter, but always developed.

sinuous, distally pale-bordered postmedian line much as in *benquetana* Schultz (1910); a pale, lunulate-dentate subterminal line, accompanied proximally by two almost confluent dark lines, distally by an ill-defined line or shade.

N. Borneo: Kina Balu, type in coll. Tring Mus.

The strongly marked hindwing, extremely rare in the group, points to an affinity with *benquetana*, though even there the character is scarcely so extreme; cell-spots larger, markings on forewing more black, aspect more fasciate, hindwing with the outer band broken into lines.

### 33. *Sauris aspricosta* sp. n.

♂, 36–38 mm. Close to *brunnescens* Warr. (Nov. Zool. iii. 295, Fergusson Island; also from Upper Aroa River and Hydrographer Mountains, British New Guinea), certainly a representative species but hardly to be treated as a race.

*Forewing* with costal margin still more strongly arched, the edge black, clothed in middle and (more strongly) distally with rough, suberect sex-scaling; dark-green bands broadened, especially the presubmarginal, this and the pale lines on either side of it rather oblique inward anteriorly; some reddish-grey irroration or "fluting" on the bands in places, notably on the distal median posteriorly and the proximal subterminal near costa.—*Hindwing* more black-grey than in *brunnescens* (with less tinge of red-brown).

New Ireland, December 1923–January 1924 (A. F. Eichhorn), 3 ♂♂ in coll. Tring Mus.

Warren's type of *brunnescens* is slightly faded; the ground-colour of the forewing in fresh specimens of both species is pale olive-green, not "silvery grey."

### 34. *Sauris lucens fortunata* subsp. n.

♂♀, 35–36 mm. Larger than *l. lucens* Warr. (Nov. Zool. vi. 35, Woodlark; also known from Sudest and Rossel Islands). Forewing perhaps of a deeper oil-green (but the tendency of these greens to fade with years must be taken into account in making the comparison), becoming grey-shaded at termen, the blackish submedian marks not very strong. Underside darker and colder grey-brown than in *l. lucens* (nearly "hair-brown").

New Ireland, November–December 1923, 4 ♂♂, 4 ♀♀ (loc. typ.); New Hanover, March–April 1923, 2 ♂♂, 5 ♀♀; all collected by A. F. Eichhorn.

Warren (perhaps describing by artificial light) calls the underside of *lucens* "greenish grey." This is quite misleading; I should describe it as drab, the gloss which gives it a distinctive hue being in the direction of ecru-drab or fawn, thus with no suspicion whatever of green.

### 35. *Sauris (Helminthoceras) erigens* sp. n.

♀, 28 mm. Face narrowly green above, dark purple-brown beneath. Palpus long (3½); base whitish; second joint green, beneath and at base black; third mostly green. Vertex green; occiput dark purple-brown. Thorax green above, whitish beneath. (Abdomen discoloured.) Legs greyish, the hindleg nearly white.

*Forewing* with apex not acute, termen less oblique than in most *Sauris* (nearly as in *abnormis* Moore or scarcely so curved); pale green with a tinge of

olive, very faintly rippled with less pale green; lines blackish, with a suggestion of purple; a deeper black dash at base in front of SC; subbasal line well out, extremely fine, slightly sinuous, obsolete anteriorly; a weak spot just beyond it on costa; antemedian very weak, slightly interrupted, zigzag, quite near the end of cell, darkened between cell and fold; a costal dash beyond; postmedian double, little beyond cell, perpendicular from costa, nearly direct, slightly incurved at fold, a little oblique outward to termen (especially the proximal one), connected by a dark mark as SM<sup>2</sup>; the proximal with a small triangular projection proximally at R<sup>2</sup>, its apex touching DC (suggesting a cell-spot); subterminals much as in *abnormis*, the proximal finely blackened to costa, the distal narrower than in *abnormis*, more macular, less band-like, the connective markings at radials and between medians strong, others indicated; termen with black vein-dots.—*Hindwing* and underside uniform glossy grey, only the hindmargin of the forewing beneath whiter (i.e. as in *abnormis*, etc.).

Woodlark Island, March–April 1897 (type); Snow Mountains, Upper Oetakwa River, up to 3,500 ft., October–December 1910, a rather smaller, more faded example; both in coll. Tring Mus.

Determined by Mr. Warren as *serraticornis* Warr., to which it bears little resemblance except in the peculiar antennal structure. Only the second species to be recorded with this structure, which, however, is closely approached by *contorta* Warr. (Nov. Zool. iv. 232) and *infirma* Swinh. (*Tr. Ent. Soc. Lond.* 1902, p. 654—♂, not “♀”); the latter is a smaller and broader-winged insect than *erigens*, with the median area broader, the postmedian line much less direct, the underside paler. The differences can hardly be merely sexual, and the localities are widely removed.

## SUBFAM. GEOMETRINAE.

### 36. *Obeidia lucifera* Swinh.

*Obeidia lucifera* Swinh., *Ann. Mag. Nat. Hist.* (6) xii. (68) 153 (August 1, 1893) (Darjiling).

*Obeidia libellulalis* Warr., *Proc. Zool. Soc. Lond.* 1893, p. 389 (August 1, 1893) (male condita) [Darjiling].

“*Obeidia tigrata* Guen.” (part) Hmps., *Faun. Ind. Moths*, iii. 309 (1895) (ex err.).

The essential difference of this species from the Chinese *tigrata* Guen. (1858) was already recognised by Elwes in working out his Indian collection, and he labelled a good Darjiling ♂ “*A. tigrina*” [laps. cal. pro *tigrata*] “var. of Moore not of Guenée.” To this specimen Warren added the name “*Obeidia libellulalis* Warr.,” but neglected to publish it definitely. As, however, his description of *fumosa* Warr. on p. 389 (loc. cit.) gives an intelligible description resp. differentiation of the two, it seems that *libellulalis* is somewhat more than a *nomen nudum* and might be available for the second of the species which are perversely merged by Hampson with *tigrata*, and I have labelled the Elwes example (“Darjeeling 20.6.86, H. J. E.”) as “type.” But inasmuch as *lucifera* Swinh. was published, and published properly, on the same day it should undoubtedly be given precedence, notwithstanding that in other conflicts between the same two papers “first revisers” have chosen Warren’s names—probably because his work was the more systematic and comprehensive.

**O. 1. *semifumosa*** subsp. n. ♂♀. Black-grey markings of forewing heavier, in particular eliminating entirely the orange maculation of the distal border,

cell-spot more or less completely fused with postmedian macular band. Hindwing as in *l. lucifera*.

Assam: Naga Hills, 5,000–8,000 ft., July–August 1889 (W. Doherty), a short series in coll. Tring Mus.

### 37. *Abraxas aesia* sp. n.

♂, 47–48 mm.; ♀, 53 mm. Head black. Palpus orange at base. Antenna of ♂ with the fascicles of cilia strong, slightly over 1. Thorax orange, slightly mixed with black and with a few white scales. Abdomen orange, with the customary rows of black spots. Legs predominantly black; hindtibial pencil of ♂ moderate.

*Forewing* not very broad; white, very slightly creamy, the markings heavy but leaving the apex clear; basal patch mixed with orange proximally, the black fairly heavy, the orange band near outer edge generally slender, well removed from the basal orange; a small grey, black-mixed midcostal spot, variable in size and shape, accompanied proximally and distally and sometimes posteriorly by inconstant grey dots or small spots; median band further represented by a small grey spot, dot or dash at base of  $M^2$ , a more proximal transverse spot between  $M$  and  $SM^1$ , and a small erect mark on hindmargin; postmedian band nearly always complete, consisting of two or three rows of more or less entirely confluent black or black-grey spots, anteriorly as a rule separated by a thread of the ground-colour, posteriorly enlarged (especially the outer), the orange suffusion strong, at least from radials to  $SM^2$ , more oblique than the band, showing on its distal part anteriorly, projecting proximally to it posteriorly; light plumbeous vein-dots or dashes on its proximal part, interneural strokes or crescents (interrupted line) on its distal from  $R^1$  to hindmargin; a longitudinal grey costa mark, projecting a little beyond the postmedian, tapering to a point; white distal band approximately 3–4 mm. wide, generally containing only a few grey dots, the terminal row of elongate spots and one or two small projections therefrom at  $R^1$  or  $R^1-M^1$ .—*Hindwing* with costa in ♂ very strongly convex proximally, rather elongate, apex rounded, termen waved; no cell-spot; some small spots close to base; median series represented by small spots on costa,  $SC^2$  and abdominal margin; postmedian by a large spot at costa, generally a more distal, oblique mark between  $C$  and  $SC^2$ ; vein-spots on  $SC^2$  (single) and on  $R^1$  and  $R^2$  (double) and a posterior blotch formed much as on forewing, wide at tornus; distal white band generally clear, 4–5 mm. wide; terminal marks somewhat crescentic.

Underside similar but less variegated, the orange and plumbeous shades wanting, the postmedian bands solid posteriorly.

Loo Choo Islands: 1 ♂, 1 ♀, ex coll. Pryer, in coll. Brit. Mus.; Okinawa March 1891, 3 ♂♂, including the type (Dr. Fritze), March 16 and 20, 1892, 1 ♂, 1 ♀ (N. C. Rothschild), February 1891, 2 ♂♂ (Dr. Fritze), in coll. Tring Mus.

The February specimens are smaller (41 mm.), perhaps representing a separate brood.

### 38. *Abraxas lugubris* sp. n.

♂, 41–50 mm.; ♀, 54 mm. Head orange. Antennal fascicles in ♂ moderately strong, fully 1. Thorax and abdomen nearly as in the preceding species. Legs largely blackish; mid- and hindfemora in part pale orange; hindtibia



pencil of ♂ rather strong. Wings shaped somewhat as in that species, the forewing slightly more rounded costally, the hindwing relatively rather less elongate, its costal margin in the ♂ scarcely swollen.

*Forewing* white, heavily marked; basal patch much as in *aesia*, rather more suffused with orange, the distal black strong between costa and fold; median band black-grey, 4 or 5 mm. wide at costa, slightly oblique outward, absorbing the deeper black cell-spot, roundly bent about  $R^1$ , becoming only about half as broad, parallel with termen, more macular, but only interrupted at fold, preceded proximally by a large spot between M and  $SM^2$  and confluent with a smaller proximal one at hindmargin; postmedian band approximately parallel with median, broadening at costa, consisting of round vein-spots in middle, only from fold to hindmargin expanded into the characteristic blotch of the group, which is rather dark and dull; a black band of 2-3 mm. width round apex from postmedian band to midterminal blotch, enclosing a small, somewhat lunular mark of the ground-colour between  $SC^s$  and  $R^2$ ; midterminal blotch large, generally confluent with postmedian band; the narrow terminal band generally confluent with posterior blotch of postmedian.—*Hindwing* with median band consisting of anterior half-band (costal spot + large cell-spot) and more or less confluent spots at fold and hindmargin (in the single known ♀ an almost complete median band formed by the partial coalescence of the two parts); postmedian series double, the proximal series large, roundish, placed on the veins, the distal rather smaller, more transversely elongate, interneural, that in cellule 6 often wanting; terminal spots rather heavy, somewhat crescentic.

Underside similar.

Malay Peninsula: Mount Tahan (J. Waterstradt), 4 ♂♂, 1 ♀, in coll. Tring Mus.

### 39. *Abraxas prosthetocneca* sp. n.

♂♀, 42-45 mm. Nearest *ditritaria* Walk. (1862). Antennal ciliation in ♂ 1 (in *ditritaria* minute). Face with narrow orange bar below. Fillet without orange scaling in front.

*Forewing* still more highly glossy and bluish than in *ditritaria*; costal edge ochre-yellow, succeeded by some irregular whitish-buff maculation across middle of wing and a more definite band at above 3-4 mm. from termen, attenuated anteriorly. Both wings with the cell-spot and postmedian dashes obsolete.

Underside similar, costal margin more brightly orange.

S. India: Madura district, March-June 1906 (H. Campbell), type in coll. Tring Mus. Also from the Palni Hills in other collections and a ♀ from Peermad, Travancore in coll. Tring Mus.

Has been inexcusably mixed with *ditritaria*.

### 40. *Drymoea hesperoides* Walk.

*Dioplis (Drymoea) hesperoides* Walk., *List Lep. Ins. Br. Mus.* ii. 323 (1854) (New Granada).

Little attention seems to have been paid to the interesting geographical variation of this species. With an excellent series before me I work it out as follows:

(a) *D. h. hesperoides* Walk. Forewing with elongate white spot behind cell rather large and clear, but not crossing fold; discal spot generally rather

large, especially in cellule 4, nearly always entering cellule 5. Colombia to E. and S. Ecuador.

In the rare aberrations in which the discal spot is reduced, the proximal spot shares this tendency; thus no single individual could be mistaken for the following race.

(b) *D. h. parambensis* subsp. n. Forewing with elongate white spot broadened so as to cross fold; discal spot much reduced, generally consisting merely of a large dot in cellule 4, sometimes with a minute and obscure supplementary one in cellule 5. Paramba, N.W. Ecuador, a very long series in various collections. Type in coll. Tring Mus.

(c) *D. h. unimaculata* Butl. (*Cist. Ent.* ii, 110, 1876). Forewing with elongate white spot obsolete above, rather small beneath; discal spot enlarged. E. Peru.

(d) *D. h. resurgens* subsp. n. Rather smaller than *h. unimaculata*. Forewing above with elongate white spot behind cell faintly reappearing, but narrowed, nearly always more or less irrorated with dark scales; discal spot nearly as large as in *h. unimaculata*. Bolivia, the type from Charaplaya, 65° W., 16° S., 1,300 m., June 1901 (Simons). Also from Carabaya, S.E. Peru.

The ♀ of this species still awaits discovery.

#### 41. *Milionia polytropa* sp. n.

♂, 52–60 mm. Eye not hairy. Head and thorax black, shot with blue (brightest on face, patagia and tegulae). Abdomen black, the first and seventh–tenth segments entirely so, the intervening segments with more or less developed orange anterior bands dorsally and laterally, but very variable; those on the second and third nearly always complete (though constricted in middle), the rest often interrupted in middle or more or less obsolete. Legs dark-grey, the foretibia and tarsus black. Hindtibia not dilated.

*Forewing* elongate, narrow, costal margin faintly sinuous (much as in *websteri* Rothsch. ♂, or with the convexity beyond middle rather more pronounced), apex rounded, termen long and very oblique, rounded anteriorly, straighter posteriorly; black; a variable oblique band from SC near end of cell towards distal end of hindmargin, but terminating about SM<sup>2</sup>; this band typically white, more or less suffused (at least at its edges) with bluish grey or plumbeous, its width at vein M varying from 2 to 4 mm.; in a second form orange-chrome or vermilion, on an average broader (especially in the orange-banded forms), but again varying; in 2 ♂♂ wanting, the wing unicolorous black.—*Hindwing* with termen weakly sinuous (about as in *websteri*); black.

Underside similar, the forewing posteriorly greyer, the hindwing with an elongate patch of greyish (in one ab. yellowish, in form 2 orange, in form 3 obsolescent) scaling on SM<sup>2</sup> near tornus; the band of forewing in form 2 more orange than above.

♀, 60–65 mm. Abdomen with the orange always restricted, sometimes with one belt complete, often with only broken lateral remnants. Wings less narrow, the margins not sinuous.

*Forewing* in forms 1 and 2 with the band broad (on M 4–5 mm.), in addition with a small, oblique, generally pear-shaped subapical band (between SC<sup>4</sup> or SC<sup>6</sup> and R<sup>3</sup>) of the same colour and sometimes with a dot close to tornus.—*Hindwing* in form 2 with a concolorous (orange-chrome) radial patch well outside

cell; in form 1 either with a similar (but clear orange) patch, or with a larger one of the same colour, tapering proximally so as to embrace, near its pointed end, a large black cell-spot, or with a large or smaller creamy or maize-yellow patch similarly exhibiting the black cell-spot.

Underside corresponding to upper, the discolorous patches at abdominal margin of hindwing variable.

New Ireland, November 1923–February 1924 (A. F. Eichhorn), a good series in coll. Tring Mus.

A very distinct species, though clearly belonging to the same structure group as *websteri* Rothsch. (1897), *meforana* Rothsch. (1897), etc., which will probably, on revision, be removed from true *Milionia*. Further minor variation occurs in the hindwing of a few ♂♂ of form 2, either in the reproduction above of the abdominal patch of underside or in the presence, on both surfaces, of an orange dash on radial fold.

#### 42. *Milionia plesiobapta* sp. n.

♂, 49–64 mm. Eye slightly hairy. Hindtibia dilated, with rather strong hair-pencil; abdominal spine rather long, moderately slender. Head predominantly metallic blue, tip of palpus blue-black. Thorax blue-black, the patagia and tegulae metallic blue. Abdomen above broadly belted with metallic blue, which in some lights appears bronzy green; posterior segments blue-black, and tuft above light buff.

*Forewing* black, with deep blue reflections, which become strongest distally; base shot with metallic blue; an orange band, often mixed with scarlet, or even predominantly scarlet, near base, somewhat variable in shape and width, its proximal edge at costa usually 2 or 3 mm. from base, sometimes less, at SM usually 4 or 5 mm. out, thence usually retracted to hindmargin, but in one example continuing oblique outward; its distal edge oblique outward from about one third costa (or less), crossing M at, or proximally to, the origin of M<sup>2</sup>, about SM<sup>2</sup> a little recurved, its course otherwise fairly direct except for a small tooth or outward bend just behind M.—*Hindwing* with the bar continued, but always orange (slightly paler), never mixed with scarlet, its distal edge usually with a pronounced tooth at radial fold just outside cell; extreme abdominal margin and fringe remaining black at end of band.

Underside similar, the band on both wings orange; an apical patch of modified scaling on hindwing slightly greyer than the rest.

New Ireland, December 1923–March 1924 (A. F. Eichhorn), a short series in coll. Tring Mus.

In a few examples the costal edge of the forewing remains more or less blackened in front of the band. In one, a black cell-spot on the hindwing is almost entirely free from the black border.

#### 43. *Craspedosis ernestina gyroleuca* subsp. n.

♂♀. Abdomen in both sexes black to the end of the third tergite, herein reverting to the coloration of *e. sobria* Walk. (Ceram), whereas the other eastern races have only two somites blackened, at least in the ♂♂, and the two colours not always so sharply defined. Both wings with the white spot relatively broader, its proximal edge more convex; that of forewing 4 or 5 mm. wide at R<sup>3</sup> and M<sup>1</sup>, that of hindwing always ample, but *not reaching the abdominal margin*.

New Ireland, January–February 1924 (A. F. Eichhorn), 3 ♂♂, 2 ♀♀, in coll. Tring Mus.

In occasional aberrations of *e. schistacina* Warr. (1896, New Guinea)—which is not certainly separable from *e. aruensis* Pagenst. (1886)—the white patches approach the form of those of *e. gyroleuca*, and the abdomen shows a little dark suffusion on the third somite, but I have before me, in a very ample series, no specimen which could be confused.

#### 44. *Hylemera rebuti* (Pouj.).

*Liparis* (?) *rebuti* Pouj., *Bull. Soc. Ent. Fr.* (6) ix. p. lxiii (1889) (Madagascar).

The type of this species, which is still catalogued among the *Liparidae* by Swinhoe in 1923 (*Ann. Mag. Nat. Hist.* (9), xi. 425), but obviously without first-hand knowledge, is in the Tring Museum, through what channel received is not now traceable. Although not labelled as “type,” it bears the label in Poujade’s handwriting exactly as published, and on the reverse side of the label a note “genre voisin des *Hylemera*,” also as published (p. lxiv). The description is very exact, though it was surely not necessary to say that it “appears from an inspection of the frenulum” to be a ♀, seeing that the sex is confirmed (if any confirmation were needed!) by an appreciable extrusion of the ovipositor. The tongue, however, was probably overlooked and the significance of the venation ignored; this is altogether that of *Hylemera* (with R<sup>2</sup> of forewing arising much before middle of DC), to which genus, as at present understood, it clearly belongs.

#### 45. *Hypochrosis recensata* sp. n.

♂, 41–50 mm.; ♀, 48–56 mm. Closely similar to *incensata* Walk. (*List Lep. Ins.* xxvi. 1520, Aru) = *discoloraria* Walk. (op. cit. xxxv. 1566, New Guinea) = *poecila* Pagenst. (*J.B. Nass. Ver. Nat.* xxxix. 152, t. x. f. 3, Aru and New Guinea); nearly always larger.

Forewing relatively longer and narrower, the costa being rather less arched distally, apex more acute, termen more oblique, generally straighter, at least in the ♂; coloration on an average rather deeper purple, suffused with greenish between central band and apex (approaching the colouring of *permeata* Prout, *infra*); midcostal black spot nearly always large and strong; the green band nearly always narrow anteriorly, without the “heel” on the base of M<sup>1</sup> which so commonly gives to that of *incensata* a foot-and-leg-shape, on the other hand almost always with a small central prong at its distal side (on M<sup>2</sup>), foreshadowing the special development of typical *bifurcata* Warr. (Nov. Zool. x. 408); post-median line olive-brown, more uniformly developed throughout than that of *incensata*, its angulation at SC<sup>5</sup> rather acute, its course thence rather straight, the blackening where it meets the green band very slight.—Hindwing with apex more acute than in *incensata*, termen almost straight; the green band nearly always narrow, its distal black edging fine.

Forewing beneath brightly coloured and sharply marked, generally with a more banded appearance than that of *incensata*, the orange-yellow ground more markedly preponderating over the red suffusions, especially in proximal area, the median band rather dark purple-grey, a purple-grey line generally well developed just proximal to the grey marginal shade; marginal shade never (as in some *incensata*) continuous, but always interrupted in middle (generally



very sharply) by a reddish patch. Hindwing with the terminal dark patches on an average smaller than those of *incensata*, the tornal receding from termen anteriorly (between the median veins).

British New Guinea: Biagi (loc. typ.), Upper Aroa River, Kumusi River, Hydrographer Mountains, Milne Bay; Dutch New Guinea: Kapaur, Arfak Mountains, Mount Goliath, Humboldt Bay; north-east New Guinea: Stephansort, Sattelberg; D'Entrecasteaux Islands; Louisiades; Vulcan Island.

Where this species and *incensata* occur together, the shape is generally the best distinction, but the Louisiade forms of *recensata* (race?) are confusingly full-winged and small. The species has passed as *incensata*, but the true *incensata* Walk. is the ♀ of *discoloraria*. Lord Rothschild (*Lep. Br. Orn. Un. Exped.*, p. 85) is quite correct in merging the Wollaston series, but unfortunately a gross mis-determination had until recently been left uncorrected in coll. Brit. Mus., *discoloraria* being labelled "*cryptopyrrhata* Walk."; for the true *cryptopyrrhata* see Swinh., *Cat. Lep. Het. Oxf. Mus.* ii. 242.

#### 46. *Hypochrosis permeata* sp. n.

♂, 40-42 mm.; ♀, 45-50 mm. Close to *recensata* Prout (*supra*). Ground-colour slightly darker and more slate-grey (less purple). Forewing with an extended apical suffusion of pale olive-green or olive-buff, only separated from the green band by a fine dark thread on DC, tapering to a point at apex and marked by the rather well-developed postmedian costal spot and the faintly traceable postmedian line; beneath sharply bicoloured, the orange ground occupying most of proximal area (except behind submedian fold) and a large costal triangle between discal band and apex, its apex resting on M<sup>1</sup>. Hindwing with termen scarcely so straight as in *recensata*; dark marginal markings beneath ample.

Dutch New Guinea: Upper Setekwa River, 2,000-3,000 feet, August-September 1910, 7 ♂♂, 2 ♀♀, very constant.

#### 47. *Hypochrosis viridifascia* (Warr.).

*Capasa viridifascia* Warr., *Nov. Zool.* iii. 415 (1896) (Humboldt Bay, Dutch New Guinea).

Swinhoe (*Cat. Lep. Het. Oxf. Mus.* ii. 343) sinks this to *discoloraria* Walk. I cannot agree. The very different ground-colour, narrower and slightly incurved green band of hindwing, intensification and different arrangement of the black markings, suppression of all the subordinate markings of upperside and presence of a central band on hindwing beneath mark it off abundantly. The seven examples which I have seen from Humboldt Bay scarcely vary at all. There are also in the Tring Museum two subspecies which Mr. Warren did not differentiate, one of which has been subsequently described as a species, while the other is still unpublished.

*H. v. prouti* B.-Bak., *Ann. Mag. Nat. Hist.* (8) xvi. 196 (1915). Ground-colour much less pure drab-grey, more mixed with isabella-colour (at least in the low-altitude specimens at Tring); costal edge of forewing proximally bright orange; first costal black spot more vertical (less oblique outward); black band of hindwing often thickened; forewing beneath with the costal yellow colour more strongly suffusing also the cell.

British New Guinea: Ekeikei and Mount Kebea, 4,000 and 6,000 ft. (coll. B.-Baker); Lower Aroa River, Kumusi River (low elevation) (coll. Tring Mus.).

*H. v. latentifascia* subsp. n. ♂. Similar to the preceding, but still more variegated, the postmedian line and some proximal shading on the forewing showing in dark purple-grey; green band of forewing widened, but very pale and vague; band of hindwing beneath weak, slender or almost entirely obsolete.

Sudest Island (Meek and Eichhorn), a good series in coll. Tring Mus.

I suspect that *H. chlorosticha* Turn. (*Proc. Linn. Soc. N. Sth. Wales*, xlii. 381) may prove another subspecies; the "fuscous median fascia" of hindwing beneath would suggest it, but the description of the upperside leaves one in doubt. I saw Dr. Turner's type several years ago, but unfortunately had not then studied the group in any detail and accepted a mischievous "lumping" in the British Museum collection. Moreover, I owe my correspondent an apology for a further lapsus, having, I gather, written *cryptorhodata* for *cryptopyrrhata* (loc. cit. 382). On the misidentification of Walker's species, see under *recensata* Prout (*supra*).

#### 48. *Fascellina meligerys* sp. n.

♂, 40 mm. Antenna slightly serrate; tufts of cilia slightly over 1. Head and body concolorous with wings; pectus yellow, venter rosy.

*Forewing* with apex less acute than typical, tornus not excised; coloration a soft blend of olive-green and violet, the former apparently the ground-colour but almost entirely supplanted by the violet shading in the proximal area, except for a longitudinal streak in cell, and in the distal, except for some slight shading near apex and vague central maculation in posterior half; lines vaguely darker olivaceous, slightly more brownish, the antemedian very indistinct, formed much as in *chromataria* Walk., the median weak, meeting the postmedian at hindmargin (the space between these two very slightly darkened), the postmedian rather nearer the termen than in *chromataria* (more as in *inornata* Warr.), rendered distinct by a fine, somewhat interrupted whitish line which accompanies it distally, its course nearly as in *inornata*; some whitish admixture at end of costa and in posterior half of distal area; fringe rufescent.—*Hindwing* not excised apically; predominantly olive as far as the postmedian line, but mixed with violet at abdominal margin; antemedian line wanting; median chiefly indicated as boundary of the narrow darkened space proximally to postmedian; postmedian at least as sinuous as in *chromataria*, accompanied distally by a fine whitish line; distal area predominantly violet, somewhat mottled; fringe rufescent.

Forewing beneath bright orange, becoming more reddish in posterior part of distal area and with strong violet suffusion along hindmargin and some slighter suffusions distally; a violet-whitish apical spot; the three lines dark, subobsolete costally, the median marked with a rather conspicuous white dot in cellule 4. Hindwing bright orange, with highly sinuous purple-red postmedian line and a characteristic series of vein-dots in place of the subterminal line which is normal in the genus.

Selangor: Kuala Lumpur, Gombak Valley, at light, October 23, 1921, type in coll. Brit. Mus., presented by the Federated Malay States Museum; Peninsular Siam: Nakon Sri Tamarat, Khao Ram, at light, 750 ft., March 2, 1922, paratype in coll. Fed. Malay States Mus.; both collected by Mr. H. M. Pendlebury.

49. *Fascellina cydra* sp. n.

♂, 45 mm. Head dull dark purple. Palpus beneath and at base orange, partly tinged with red. Antennal shaft purplish; fascicles of cilia about 1. Thorax and abdomen above dull purple; beneath bright orange, parts of the pectus a little yellower. Femora and tibiae orange, tarsi mostly darkened.

*Forewing* with termen slightly more oblique than in *chromataria* Walk.; gently curved, not excised behind  $M^2$ , hindmargin smooth; colour nearly as in that species or a little lighter and more variegated, the purplish tone more pronounced, the olive and russet wash between median and postmedian lines anteriorly to  $R^1$  cleaner, the pale midcostal patch considerably larger; no white cell-marks; antemedian line distinct, blackish, very acutely angled outward just behind  $SC$ , slightly dentate outward behind  $SM^2$ ; an elongate olive patch in end of cell anteriorly; median line vague, straightish, thickened to a shade in anterior half; postmedian much as in *chromataria*, the anterior projection longer, the two behind  $R^3$  slighter; subterminal line indicated in posterior half, with some irregular shading proximally.—*Hindwing* with termen straight or extremely slightly concave between  $C$  and  $SC^1$  (not excised); paler than forewing (especially in an ill-defined central band) with the olive shadings predominant, the purple chiefly confined to basal and tornal regions, and paler suffusions in other parts of distal area; postmedian double line (dark proximally, white distally) sharply expressed, very much more sinuous than in *chromataria*, the inward curve at radials being deep, the outward double lobe at  $M^1$  pronounced; fringe and part of termen darkened as in *chromataria*.

Forewing beneath with the light violet postmedian line far more produced than in *chromataria* (even more than in *rectimarginata* Warr.), the posterior side of the projection running straight along  $R^1$  for 5 mm., its end (in cellule 6) about 1 mm. from termen, its anterior side strongly oblique and slightly curved; costal region very broadly yellow except at apex, cut (at about three-fifths costa) by a tawny band which terminates in a dark blotch between  $DC$  and postmedian; posterior part of wing variegated with yellow, ochreous, tawny and violaceous; apical region with the pale violet more prevalent. Hindwing orange-ochreous, with more rufous, highly sinuous postmedian line (much as in *aurifera* Warr., Nov. Zool. iv. 118, and *meligerys* Prout, *supra*) and subterminal row of large dots as in the preceding species; fringe dark.

Celebes: Tawaya, N. of Palos Bay, August–September 1896 (W. Doherty), 2 ♂♂ (type); Kalewara, Central Celebes, August 18, 1912 (Dr. Martin), 1 ♂. All in coll. Tring Mus.

Most like a giant *aurifera* Warr. (Borneo and Malay Peninsula), but very different on forewing beneath.

50. *Epifidonia absona pyrsa* subsp. n.

♂. Forewing more red-brown (less darkened) than in *a. absona* Swinh. (*Proc. Zool. Soc. Lond.* 1889, p. 427). Hindwing with the fiery red costal area less irrorated, much more extended, entering the cell and reaching or crossing  $R^1$  except apically, where it ends about at  $SC^1$ . Underside, less strongly dark-clouded than in *a. absona*, the green patch behind end of cell of hindwing greatly reduced.

Assam: Naga Hills, 5,000–8,000 ft., July–August 1889 (W. Doherty), 3 ♂♂ in coll. Tring Mus. (type). Burma: Kabru (Manipur), 2 ♂♂ in coll. Brit. Mus.

51. *Elphos nimia* sp. n.

"*Elphos hymenaria*" Warr., Nov. Zool. i. (1894) (nec Guen.).

"*Elphos pardicelata* race *megaspilata* Warr.," Hmps., Faun. Ind. Moths, iii. 250 (1895) (in err.).

♂♀, 99–110 mm.

♂. Larger and darker than *pardicelata* Walk. (with more of the "purplish fuscous" shading); antennal pectinations less long; abdomen beneath buff, not whitish; cell-spots much smaller; lines more deeply lunulate-dentate; the whitish line which distally accompanies the postmedian more expanded at costa of forewing; hindwing with termen more deeply dentate. Underside much less white than in *pardicelata*, the forewing almost wholly occupied by the confluent dark maculation and with an almost solid dark terminal band, the hindwing also with a good deal of dark maculation and with a terminal dark band enclosing distal-marginal interneural white spots (those between the radials small).

♀. Much more mixed with white than the ♂, but retaining much more brown than *pardicelata* ♀, notably a broader and brighter median shade, a shade proximally to the postmedian and a less interrupted terminal band; further differing from *pardicelata* in the thicker black postmedian teeth, broader white costal mark beyond, smaller cell-spots, more irrorated underside, more dentate hindwing, etc.

N. India: Sikkim, Bhután, Khasis, the type from Rikisum, British Bhután, 7,000 ft. (H. J. Elwes) in coll. Tring Mus.

Through what mental aberrations Hampson made this "the eastern race" of the very distinct *pardicelata* (which has a similar but wider range) or confounded it with *megaspilata* Warr. (*pardicelata* ab.), I am at a loss to imagine, except that these are the only two Indian *Elphos* with "vein 10 from the cell."<sup>1</sup> Warren's misidentification of *hymenaria* (Nov. Zool. i. 431) is much more excusable, but by Guenée's size indication and his figure of the ♀ I take it to be certainly *procellosa* Warr., as determined by Hampson.

52. *Elphos cavimargo* sp. n.

♂, 83–94 mm. Size of average *pardicelata* Walk., coloration more as in *nimia* Prout (*supra*) or with a little more of the buff or ochreous admixture (closely as in *hymenaria* vera). Antennal pectinations about as in *nimia*. Abdomen beneath grey, with hardly any tinge of buff.

*Forewing* with termen almost smooth, slightly less oblique than in *nimia*, with a very faint (sometimes scarcely appreciable) sinuosity between R<sup>3</sup> and M<sup>1</sup>; SC<sup>2</sup> from cell (16 examples examined); markings closely as in *nimia* and *hymenaria*, but with a characteristic white or whitish spot between R<sup>1</sup> and M<sup>1</sup> outside the subterminal line; fringe chequered with white.—*Hindwing* appreciably narrower than in the allies, termen much less dentate than in *nimia*, notably at SC<sup>2</sup> and posteriorly to R<sup>1</sup>, with a very characteristic, though not very deep, excavation between R<sup>1</sup> and R<sup>3</sup>; markings about as in *nimia*.

Forewing beneath much as in *nimia*, but with the dark border rather broader,

<sup>1</sup> This venation is not absolutely constant, though an excellent general guide. In examining a large number of both species I have found a very occasional example of each in which SC<sup>2</sup> is connate to just stalked. In *E. insueta* Butl., from Japan and W. China, it is still more unstable.



about as in *hymenaria* and similarly with white spots at apex, in cellule 3 and at tornus, their respective development, however, different—in *hymenaria* larger at apex, small in cellule 3, in *cavimargo* vice versa. Hindwing much as in *nimia* or a little darker—transitional towards *hymenaria*.

North Borneo: Kina Balu (J. Waterstradt), 24 ♂♂ in coll. Tring Mus.

### 53. *Medasina oblivia* sp. n.

♂, 48 mm. Head dark brown, mixed—especially on vertex—with white. Palpus shortish-moderate, the projecting hair beneath first joint whitish, second joint stout, densely scaled, externally dark, around the minute third joint whitish. Antenna with pectinations long and rather lax, apical one-fourth merely subserrate with short bristles. Body above dark brown, somewhat mixed with white, a narrow white belt across base of abdomen; beneath lighter brown. Foreleg partly blackened, the dark tarsus light-ringed; hindleg pale, the hair of the femur almost white, the tibia much dilated, with a strong light-brown, white-mixed hair-pencil, the terminal spurs short.

*Forewing* with  $SC^{1+2}$  coincident, connected by a short bar (running backward from about opposite base of  $SC^3$ , ? remnant of the true  $SC^1$ ) with C; fovea not strong; white, mostly obscured by coarse brown irroration and brown clouds; proximal area almost entirely clouded; antemedian line dark fuscous, from costa at 6 mm. to hindmargin at 4 mm., slightly excurved anteriorly, then oblique inward, with a slight indentation at fold; median shade arising just proximal to the dark cell-spot, thick anteriorly, fusing with some dark shading around the cell-spot, inbent between this and fold (almost reaching base of  $M^3$ ), indented on  $SM^2$ ; postmedian slight, chiefly expressed by outward teeth or dashes on the veins, the lunules between being sometimes scarcely noticeable; stronger anteriorly (where it forms a deep inward bend in cellule 6 and is accompanied distally by dark clouding) and posteriorly (where it closely approaches the median and is accompanied distally by a large but not sharply defined dark spot); terminal area broadly clouded except between  $R^3$  and  $M^3$ , the subterminal visible on the cloud as whitish dots with dark ones touching their distal side; termen with weak interneural spots; fringe brown, somewhat mixed with white.—*Hindwing* as far as the postmedian white, with fine brown irroration, a rather large black cell-spot and a thin, faint wavy line well proximal thereto; postmedian little beyond middle, lunulate-dentate (the teeth rather long and sharp), thick anteriorly, strongly outbent between the radials; distal area much as on forewing, but with broader, more continuous, wavy subterminal, which is dark-shaded proximally and only interrupted by the central pale patch.

Underside white, with black-brown markings, strongly recalling *obliterata* Moore (1867); distinguishable at once from that—apart from individual variability in the size of the terminal (on hindwing subterminal) patches—by the presence of an interrupted postmedian band on forewing, consisting of thick subconfluent vein-streaks from costa to  $R^3$  and slighter well-separated ones on  $M^1$ ,  $M^2$  and  $SM^2$ , and of antemedian and (larger) postmedian costal spots on hindwing.

Assam: Shillong, a few examples in coll. Tring Mus., coll. L. B. Prout et coll. Agric. Res. Inst. Pusa, the type in the first-named, dated May 1893.

Apparently not common and strangely overlooked by Warren as an ab. of *obliterata*. That species has “11 out of 12 free,” this “11 out of 12 running

quickly into 10," each constant in every example examined. "*Lassaba*" *subdecorata* Warr. (1897) shows the venation of *oblivia*, which may possibly be a shorter-winged race of it, generally with more white, subterminal bands of hindwing beneath broader, etc.

A race (?) from Sikkim, rather larger and much less densely irrorated, is represented by a single ♂ ex coll. Elwes and presumably 2 ♂♂ (without locality label) ex coll. Felder, the latter quite erroneously labelled *contaminata* Moore.

#### 54. *Hemerophila subterminalis* sp. n.

♂♀. 36–40 mm. Superficially nearest *humeralia* Moore (1867), except in its much smaller size. Hindtibia much less heavily dilated, the hair-pencil without the blackish admixture. Face with the dark upper part less extended.

*Forewing* with termen slightly less crenulate, slightly less oblique posteriorly; tone a little less reddish brown; median line stronger; subterminal rather more discernible on the dark subternal cloud.—*Hindwing* with termen less deeply dentate, especially at the medians; subterminal area more marked, the brown line which succeeds the postmedian being followed by a pale line, this again by a narrow blackish shade which bounds the subterminal proximally; the subterminal itself fine, defined distally by a brown line.

N. India: Khasis, 2 ♂♂, 1 ♀, including the type, all in coll. Tring Mus.; Darjiling (F. Möller), ♂ in coll. Tring Mus., 1 ♂ in coll. L. B. Prout.

#### 55. *Cleora hemiphanes* sp. n.

♂, 40 mm. Related to *variegata* Moore (*Lep. Coll. Atk.* p. 240), though considerably larger. Palpus rather longer (almost 2), with relatively longer terminal joint. Antennal pectinations slightly longer and continued a little further (to the 40th joint, including the rudimentary ones). Hindleg about as in *variegata* (tibial hair-pencil strong, tarsus scarcely one-half tibia).

*Forewing* with the fovea not quite as extreme as in *variegata*; SC<sup>1</sup> very shortly stalked with SC<sup>2</sup>, anastomosing with C; predominantly reddish brown with black irroration and markings, more recalling the tone of *megaspilaria* Moore (*Proc. Zool. Soc.* 1867, p. 629) than of *variegata*; antemedian line regularly double, excurved anteriorly, angled inward at M and slightly at SM<sup>2</sup>; median rather thick, curved rather than angled round the cell-mark, with which it is made confluent by black shading; the pale band between median and postmedian more ochreous than in *variegata*, brightest between the radials, obsolescent at both ends; subterminal slight.—*Hindwing* with costal margin arched proximally, but less highly than in *variegata*; more buff than in that species, becoming ochreous posteriorly, recalling *megaspilaria* Moore or *semiclarata* Walk.; abdominal margin marked much as in *variegata*; proximal area slightly suffused with grey; postmedian line reduced to vein-dots from R<sup>1</sup> hindwards, not very oblique at abdominal margin; subterminal and its dark shade only developed in posterior part.

Underside more ochreous than in *variegata*, proximally more clouded, the band beyond median shade cleaner, the dark border less solid on forewing, obsolete on hindwing.

Java: Mount Gede, 8,000 ft., June 25, 1910 (E. A. Cockayne). Type in coll. L. B. Prout.

56. *Cleora semipullata* sp. n.

♂, 35 mm. In build, texture and general coloration closely akin to *semialba* Moore (*Lep. Coll. Atk.* p. 241). Antennal pectinations slightly longer.

*Forewing* (as in *semialba*) with  $SC^1$  and  $SC^2$  both free; more strongly clouded with blackish than in *semialba*, leaving pale a very narrow, ill-defined, curved band between median and postmedian lines, recalling *imbecilis* Moore (l.c.); cell-mark, antemedian and median lines little differentiated on the darkened wing, the antemedian apparently as in *semialba*, the median rather thick, more regularly curved round the cell-mark (less oblique anteriorly, less angled behind  $R^1$ ); postmedian dots fairly large; midterminal pale spot rather small and ill-defined.—*Hindwing* distinguishable at a glance from that of *semialba* by having the elongate cell-spot larger, a smoky median shade from  $SC$ , broadening to abdominal margin, and a broader, blacker terminal band, anteriorly reaching the postmedian, posteriorly tapering gradually, enclosing close to tornus a pale subterminal mark; the space between postmedian and subterminal suffused with pale ochreous.

Underside distinguished by the broader blackish borders, reduced mid-terminal spot of hindwing, increased markings on hindwing (much as above) and suffused forewing from base to median shade anteriorly to  $M$  and  $M^1$ .

Pahang, F.M.S.: Fraser's Hill, 4,000 ft., at light, August 29, 1923 (M. R. Henderson). Type in coll. Brit. Mus., presented by the Federated Malay States Museum.

A broad-banded race (?) of *semialba* from Tonkin (one example in coll. Tring Mus.) is in some measure intermediate. From dark forms in the *variegata* group, the present species differs in its longer and slenderer abdomen, rather longer abdominal margin of hindwing, rather smoother scaling and more sharply defined dark borders.

57. *Cleora pammicra* sp. n.

♂, 18 mm. Face smooth, white-grey. Palpus scarcely over 1, rough-scaled; dark-mixed on outer side, the small terminal joint white-grey. Vertex whitish, mixed with brown. Antennal pectinations short (about 2), relatively rather widely spaced, reaching to about the 25th joint, the apical two-fifths (approximately) merely shortly ciliated. Thorax and abdomen whitish, mixed with brown; abdomen with ill-defined paired blackish dorsal spots. Legs dark-mixed, with whitish rings at ends of joints; hindtibia with hair-pencil.

*Forewing* with termen smooth, little curved, moderately oblique;  $SC^1$  weak, running into  $C$ ; fovea large; white, with coarse black-brown irroration, in places (especially in basal and distal areas) confluent into dark shades; cell-dot large, black; lines blackish; antemedian excurved in cell, then oblique inward; median thickened at costa, more or less confluent with cell-spot, then rather slight, gently incurved between cell-spot and fold (or  $SM^2$ ); postmedian accentuated by black dots or minute dashes on the veins, about parallel with median nearer to this than to termen, a little excurved before the gentle inward curve (i.e. about  $R^1$ – $R^2$ ); distal area with an ill-defined pale patch about  $R^3$  and  $M^1$  (caused by weakening of irroration) and an irregularly crenulate, posteriorly broad white subterminal line; terminal line black, thickened into interneural dots; fringe mottled.—*Hindwing* with termen little crenulate, a very shallow concavity between the radials; coloured as forewing; slightly less irrorated

proximally and costally; cell-dot rather large; an ill-defined line proximal to it; postmedian formed much as on forewing, weak costally; distal area rather more weakly marked than on forewing.

Underside similar; forewing rather more blurred; hindwing with cell-dot strengthened.

Pahang, F.M.S.: Cameron's Highlands, at light, No. 4 camp, 4,800 ft. October 12, 1923 (H. M. Pendlebury), type in coll. Brit. Mus., paratype in coll. Fed. Malay States Mus.

Possibly related to *polysticta* Hmps. (*Journ. Bomb. Nat. Hist. Soc.* xiv. 507, but still smaller, shorter-winged, with shorter pectinations, etc. etc. Closer to *concinna* Warr. (*Nov. Zool.* xiii. 139).

#### 58. *Boarmia glochinophora* sp. n.

"*Boarmia reparata* Walk." ♂, Hmps., *Faun. Ind. Moths*, iii. 269 (1895) (in err.).

♂, 42-48 mm. Face and palpus black-brown; vertex and a slight fringe of scales over upper part of face pale. Antennal pectinations long, inclined to curve. Thorax and abdomen concolorous with wings. Hindtibia dilated, with pale brown hair-pencil.

*Forewing* less elongate than in *cineracea* Moore (*Lep. Coll. Atk.* p. 244); SC<sup>1</sup> and SC<sup>2</sup> long-stalked, their stalk connected by backward bar with C; fovea not very strong; brown, with brighter brown and sparse black irroration, a shade of the brighter brown outside the postmedian; cell-spot rather large, sharply black; lines much as in *cineracea* but slightly less oblique posteriorly, postmedian with its lunules brownish, not very distinct, its outward teeth on the other hand sharp, black-tipped; proximal filling-in of subterminal blacker-mixed than in *cineracea*; subterminal itself often whiter, commonly with some black interneural dots on its outer edge; terminal black dots rather large.—*Hindwing* with extreme base whitish, then concolorous with forewing; much black irroration between base and cell-spot; cell-spot minutely pale-pupilled; postmedian line blacker than in *cineracea*, slightly more proximal, more incurved between R<sup>3</sup> and SM<sup>2</sup>; markings beyond much as on forewing.

Underside rather lighter, browner and more sharply marked than in *cineracea*, rather recalling a brownish *separata* Walk. (*List Lep. Ins.* xxi. 381); cell-spot of forewing very large and black; postmedian of hindwing sharply bent in the middle almost as in *lioptilaria* Swinh (*Fasc. Malay. Zool.* i. 91).

Khasis, fairly common, January, February, March, April, November; type March 1894, in coll. Tring Mus.

Walker's type of *reparata* is a ♀ of a scarcer, narrower-winged species with the markings much more like those of *costaria* Guen. (*Spec. Gén. Lép.* ix. 242).

#### 59. *Boarmia (Catoria) affinis* sp. n.

*Catoria affinis* Warr., MS. in coll. Tring Mus.

♂, 36 mm. Face with a black band above middle, whitish below. Palpus less than 1½; white, mixed with brown-grey, outside blackened. Vertex whitish. Antennal pectinations about 6, moderately stout, mostly only cleft at the extreme tips (two or three of the proximal ones cleft to base). Thorax and abdomen whitish brown-grey, the abdomen dorsally with ill-defined pairs of spots on the first segments. Legs pale, the foreleg somewhat darkened above. Hindtibia with hair-pencil.



*Forewing* rather narrow, apex pointed, termen strongly oblique;  $SC^{1-2}$  coincident, anastomosing slightly with C (type) or connected by minute bar, afterwards connected by weak bar with  $SC^{3-4}$ ; white, irrorated and suffused with olive-brownish, a vague whitish band remaining proximally to the postmedian and some ill-defined spots in distal area; markings as in the allies (*sublavaria* Guen., *olivescens* Moore, etc.).—*Hindwing* with the cell-spot annular, as in *olivescens*, the dentate median line proximal thereto rather strongly darkened and succeeded by a characteristic dark shade between this and abdominal margin; the area between these and the postmedian almost clear; postmedian and markings beyond as in the allies, the postmedian not much bent in middle.

Underside suffused and marked nearly as in the allies, the darker distal area not very broad, not sharply defined, the apical and midterminal patches of forewing sharply white; cell-spot of hindwing obsolescent.

♀ rather whiter, distinguishable from *sublavaria* by its smaller size and the annular cell-mark of hindwing.

Malay Peninsula: Penang, 1896 (Curtis), type in coll. Tring Mus.; Singapore, November 15, 1922, coll. Raffles Mus., etc.; also from Engano, in coll. Tring Mus.

In spite of slight differences in the antenna (irregular in the whole group), slightly acuter apex and other small distinctions, this may prove a race of *hemiprosopa* Turn. (1904); material is needed from the Sunda Islands, etc.

#### 60. *Ectropis cuneisparsa* sp. n.

♂, 48 mm. Face with small projecting cone of scales; brown. Palpus blackish on outer side. Vertex brown. Thorax and abdomen above concolorous with forewing, beneath paler, with some dark admixture in front of pectus; abdomen rather slender. Hindtibia not dilated.

*Forewing* with  $SC^{1-3}$  long-stalked, from cell; pale brown with an olivaceous tinge and with coarse black-brown irroration; costal edge with dark dots or minute strigulae; lines black-brown, marked with blacker wedge-shaped dashes on the veins; antemedian and postmedian formed much as in the *bistortata* group, but with the duplicating shades on the proximal and distal side respectively strengthened, that of the postmedian of a nearly uniform intensity throughout, throwing into stronger relief the dentate pale line which separates it from the postmedian; median line less strong, arising well proximally to the cell-spot and at first oblique inward, but making a very characteristic outward bend in cell, then becoming again slightly oblique inward (but perhaps as variable as in *bistortata* Goeze); cell-mark blackish, elongate; subterminal line much as in the *bistortata* group, the proximal dark mark at costa reduced, isolated from the subcostal wedge, the radial pair rather large, confluent into a horse-shoe mark, the dark shading behind  $M^2$  rather broad; terminal dots very large.—*Hindwing* much more whitish, except along abdominal and to a less degree along distal margin; a large, slightly crescentic dark cell-spot; median line very weak except in a diffuse dark mark at abdominal margin; postmedian and markings beyond much as in *bistortata*, becoming weak towards apex; terminal dots large.

Forewing beneath blurred and suffused, somewhat blotched, only terminally paler; cell-spot and subterminal marks discernible; terminal dots fairly strong. Hindwing pale, very weakly irrorated; cell-dot moderate; no lines; terminal dots obsolescent.

Java : Mount Gedeh, 8,000 ft., June 25, 1910 (E. A. Cockayne). Type in coll. L. B. Prout, kindly presented by the discoverer.

61. *Ectropis everetti* sp. n.

♂, 45 mm. Shape, coloration and facies almost exactly as in well-coloured, well-marked examples of *E. bhurmitra* Walk., distinguished as follows :

Antennal fascicles of cilia placed on *slender pectinations* which exceed in length the diameter of the shaft. Abdominal orifice without spine. Hindtibia without hair-pencil. Forewing with  $SC^{1-2}$  long-stalked,  $Sc^2$  connected with  $SC^{3-4}$  ; antemedian line slightly more bent, becoming rather more oblique behind ; cell-mark well developed, slightly elongate ; median shade better marked ; postmedian line less incurved posteriorly, throughout marked with larger dots on the veins, but with the costal one not specially prominent ; the shade beyond not markedly strengthened at  $R^1$  and  $M^1$  ; beneath with the markings perhaps even more shadowy than in *bhurmitra* (the hindwing beneath, as in some *bhurmitra*, quite unmarked).

Lombok, 4,000 ft., June 1896 (Everett), type in coll. Tring Mus.

62. *Ectropis (Ruttelerona) indiligens* sp. n.

♂, 45-48 mm. Almost indistinguishable from *lithina* Warr. (Nov. Zool. x. 398, as *Paraleis*), except that, while the hindtibia retains the hair-pencil (at least in the great majority of examples), the abdominal spine—well developed in *lithina*—is entirely wanting. Rather browner than ordinary *lithina*, almost without whitish admixture in median area ; the white patch of forewing in front of the longitudinal black dash at base of  $R^1$ , conspicuous in *lithina*, is generally ochreous-brownish, almost concolorous with ground-colour, thus not noticeable ; cell-dot of hindwing on an average larger than in *lithina*.

♀ perhaps even darker than that of *lithina*, not definitely distinguishable.

British New Guinea : Biagi, Mambare River, 5,000 ft., January and February 1906 (A. S. Meek), a series, including the type ; Angabunga River, 6,000 ft. and upwards, November 1904 - February 1905 (A. S. Meek), 2 ♂♂, 2 ♀♀. Type in coll. Tring Mus.

The genitalia of both species have been examined by Dr. K. Jordan and Rev. C. R. N. Barrows, without revealing any difference, but the structural distinction noted above precludes our treating *indiligens* as a mere local form of *lithina* ; moreover, the type locality of the latter (Upper Aroa River) would not be expected to produce a separate race from other spots in the same Range.

63. *Ectropis (Ruttelerona) lithina kinabalensis*, subsp. n.

♂, 52-54 mm. Larger than the name-typical New Guinea race (Warren, 1903), rather browner (with less olive-grey gloss), some of the dark markings deeper (more mixed with black), anterior subterminal longitudinal black marks of forewing more strongly developed, antemedian line of forewing on an average more acutely angled subcostally, hindwing perhaps with larger cell-spot, under-side with less deep border.

Borneo ; Kina Balu (Waterstradt), 7 ♂♂ in coll. Tring Mus., including the type. Also in coll. Sarawak Mus., coll. L. B. Prout, etc., from the same locality.

64. *Ophthalmodes rufilauta* sp. n.

♂, 60 mm. Head whitish green, with a very faint reddish dot on each side of face. Palpus tinged with rufous. Body above pale green, with a little rufous admixture in places, especially on edges of patagia and tegulae.

*Forewing* pale green (almost olive-yellow), mixed with white (but much less so than in *cordularia* Swinh.); costa spotted with black at beginnings of lines and with black dots or minute dashes between; markings cinnamon-rufous; discal ocellus elongate, a little bent in middle, tapering behind, slightly blackened just outside the pale centre; antemedian line feeble, almost interrupted, weakly sinuous; median line with a sharp tooth outward on  $R^1$ , then touching distal edge of cell-mark, posteriorly incurved, on  $SM^2$  dentate outward and mixed with black, on hindmargin mixed with black; postmedian marked chiefly by teeth or dashes on the veins, posteriorly oblique inward to approach the median (as in the allies, e.g. *herbidaria* Guen.); the space between median and postmedian from fold to hindmargin cinnamon-rufous; subterminal rather less deeply dentate than in *pertusaria* Feld., its interrupted cloudings similar (or rather stronger posteriorly and at tornus) but rufous, only marked with black interneural teeth at radials and at fold; terminal dots small, the first four (in cellules 7, 6, 5, 4) mixed with black; fringe between the veins with rufous clouding, which becomes more smoky at tips.—*Hindwing* concolorous; cell-mark much smaller; median line dark-mixed, acutely dentate outward on SC, then almost straight (or very faintly incurved); a broad cinnamon-rufous cloud between this and postmedian weakening costally (much as the blackish band of *cordularia*); postmedian much as in the allies; subterminal appreciably angled at radial fold, the black markings on its proximal shade almost confined to posterior part; terminal dots almost obsolete.

Underside very pale pinkish buff; forewing with minute black costal dashes; cell-spots black, elongate, on forewing large, on hindwing much smaller; subterminal band fawn, mixed with black; that of forewing filled in with buff from costa to  $SC^2$ , anteriorly about 5 mm. wide, at  $R^2$  with a blurred distal projection, posteriorly tapering; that of hindwing narrower, almost obsolete between  $R^2$  and  $M^2$ ; terminal dots obsolete, except the black ones of forewing, which are faintly indicated; fringe of forewing dark-spotted at tips.

Sarawak: Poeh Mountains, 3,500 ft., July 1892 (A. Everett), type in coll. Tring Mus.; Bidi (C. J. Brooks), 2 ♀♀ in coll. Joicey. Singapore, 1 ♂ in coll. Brit. Mus. Kuala Lumpur: Gombak Valley, October 18, 1921, 1 ♀ (much torn) in coll. Fed. Malay States Mus.

Probably nearest *cordularia* Swinh. (1893), in spite of the very different colouring.

65. *Xylopteryx doto* sp. n.

♂♀, 32–35 mm. Closely related to *protearia* Guen. and fully as variable. Smaller; both wings with termen appreciably less crenulate.—*Forewing* with discal ocellus small, its black circumscription commonly weak or obsolescent, its pupil bluish white; postmedian line posteriorly rather more markedly oblique outward (intermediate towards the shape of that of *arcuata* Walk. [1862] or *prasinaria* Hmps. [1909]).—*Hindwing* with the median shade in general slightly more oblique than in *protearia*, the postmedian slightly outbent about the middle, the two consequently less nearly parallel. Both wings beneath rather

pale, seldom very heavily irrorated or suffused, the dark borders commonly broad, heavy and sharply defined, very often almost reaching termen except for apical and midterminal spots of the ground-colour.

Madagascar: Diego Suarez (G. Melou), a very long series in coll. Tring. Mus.

It is impossible within a brief compass to describe the variation. The general tone is on an average distinguishable from that of *protearia*, the paler, more ochreous, or even faintly olivaceous hues prevailing (at least in median area of forewing) rather than the redder brown or deep fuscous which is common in *protearia*—thus more approached by ab. *lucidiscata* Walk. than by other *protearia* forms. The variation on the forewing above is due, however, to the infinite inconstancy in the strength and distribution of the dark cloudings, which may be chiefly subterminal, or basal and subterminal, may produce an intense antemedian band, or may be diffused over a large area of the wing, or conversely be concentrated posteriorly, leaving the basal and median areas anteriorly pale; median area of forewing sometimes narrowed, with the limiting lines connected by a longitudinal line on the fold.

### *Luxiaria* Walk.

Under the name of *Luxiaria contigaria* Walk., Hampson (*Faun. Ind. Moths*, iii, 195) includes an extraordinary medley. It has been to some extent put into order by Swinhoe subsequently (*Cat. Lep. Het. Oxf. Mus.* ii, 264), but some vital points have escaped detection.

Unfortunately the type of Walker's *contigaria* (the oldest name quoted) is not the species which Swinhoe assumed it to be, but is the same as *inexactata* Walk. (= *straminea* Warr. 1896 = *ditrota* Meyr. 1897), for which, however, a still older name has been entirely overlooked, namely *tephrosiata* Guen. (*Spec. Gén. Lép.* x, 18), very well described from a Borneo ♀. As this very widely distributed insect—apparently scarcely varying from N. India and the Greater Sunda Islands to the D'Entrecasteaux—is always ♀,<sup>1</sup> it is practically certain that it must be the other sex of the superficially very different *Eutoea heteroneurata* Guen. (always ♂, with similar range). Guenée's two names were published simultaneously; I therefore avail myself of Art. 28 of the "International Code of Nomenclature" and retain the one which has been in general use and refers to the more distinctive sex, the more so as there is a "*tephrosaria*" (Moore) in the immediate vicinity. If *Eutoea* is more than a subgenus, the species will stand as *Eutoea heteroneurata* Guen. (♂), with synonyms *tephrosiata* Guen. (♀), *personaria* Walk. (♂), *contigaria* Walk. (♀), *inexactata* Walk. (♀), *straminea* Warr. (♀) and *ditrota* Meyr. (♀).

This leaves without a well-assured name the species to which Hampson's description seems primarily to apply, and which he figures on p. 196, fig. 109—antennal ciliation minute, abdominal spine short, tibial pencil white, forewing not narrowed, median line touching cell-spot, underside banded, hindwing fairly strongly crenate; for *turpisaria* Walk. is really the ♀ to *subrasata* Walk. (see *infra*), which is a narrower-winged, more suffused insect with longer antennal ciliation, *submonstrata* Walk. the ♀ to *nigripalparia* Walk. (which must sink

<sup>1</sup> The Amboina *Nadagarodes* mentioned by Warren (*Nov. Zool.* iii, 411) as ♂ to his *straminea* is an impossible claimant, but is a race or very close ally of *sordida* Warr. (*Nov. Zool.* iii, 303, as *Callectaera*). I forbear to name it, as I have not yet made out whether it may be the "*Psamatodes*" *acutaria* of Pagenstecher (*J.B. Nass. Ver. Nat.* xli, 177).



thereto), a greyer species with differently shaped termen, etc., *tephrosaria* Moore another good species (discussed below) and *fasciosa* Moore and *hypaphanes* Hmps. belong to the group of *amasa* Butl., with the forewing more falcate, its termen not waved. There remains only *intensata* Moore unplaced (type in coll. Standinger) and this is very imperfectly described, though probably a dark aberration of the species in question; but for the present I can see nothing against—and some points (e.g. the “filiform” ♂ antenna) definitely in favour of—Swinhoe’s determination (*Tr. Ent. Soc. Lond.* 1902, p. 614) of the older *acutaria* Snell. as the Malayan form of his “*contigaria*” (i.e. the present species), and I therefore accept it provisionally, perhaps with *intensata* Moore for its Indian race. A few other overlooked or misidentified species in the group must now be described.

#### 66. *Luxiaria emphatica* sp. n.

♂♀, 38–43 mm. Very close to *tephrosaria* Moore (1867). Abdominal spots of ♂ oftener weakly developed.

*Forewing* with the same pale ground-colour and black costal spots (the antemedian, however, oftener reduced); median shade rather stronger, rather variable, but generally arising somewhat more distally, less excurved near costa and more oblique inward to behind middle; postmedian not more oblique than termen (in *tephrosaria* appreciably more oblique), reaching hindmargin about 1 mm. farther from tornus, the black hindmarginal spot nearly always present but never (so far as yet known) enlarged as in a common aberration of *tephrosaria*; an irregular grey (shadowy) band beyond, much as in *subrasata* Walk. and *acutaria* Snell. (strongest in the ♀♀).—*Hindwing* chiefly distinguishable by the last-named character.

Underside much more strongly marked than that of *tephrosaria*, the postmedian line of hindwing always strong, the shades beyond it rufescent, in the ♀ broader and darker.

Assam: Khasis (the ♂ type from Cherrapunji, May 1893, in coll. Tring Mus.); Nagas.

I should have been inclined to regard this as a form (perhaps seasonal, though I have seen few dated specimens) of *tephrosaria*, but for the constant difference in the postmedian line; one weakly marked Khasi ♂ is in coll. Tring Mus. might otherwise be regarded as somewhat transitional. In deciding which of these very close allies represents Moore’s lost type (coll. Russell), I have been guided by the facts that “Bengal” there probably denoted Sikkim (the weakly marked species is known to me from Kulu, Sikkim, Bhutan and Assam), that Elwes has labelled a Sikkim ♂ “*tephrosaria*,” agrees with one of two forms under that name in coll. Moore; which is type? and that Warren in coll. Tring Mus. has also determined that same species as *tephrosaria*. On the other of Moore’s “two forms,” see *L. mitorrhaphes*, *infra*.

#### 67. *Luxiaria versiformis* (praec. subsp.?).

♂. Like the preceding, of which it may probably prove a race, but somewhat narrower winged (transitional towards the shape of *subrasata* Walk. ♂), much less pale, more clay-coloured, the median line of the fore-wing anteriorly excurved more as in *tephrosaria*, the underside more deeply coloured, with broader, darker subterminal bands, as suggestive of certain *subrasata*-forms as of

*tephrosaria*; underside of forewing behind the cell suffused with dark grey (in *emphatica* white).

Malay Peninsula: Gunong Ijau (loc. typ.); Sumatra: Batang Proepoe (Padang Bovenlanden, 1,500 m.); Borneo: Kina Balu.

#### 68. *Luxiaria mitorrhaphes* sp. n.

*Acidalia tephrosaria* Moore in coll. (nec *Proc. Zool. Soc. Lond.* 1867, p. 643, coll. Russell).

*Luxiaria turpisaria* part., Swinh., *Cat. Lep. Het. Oxf. Mus.* ii. 264 (nec Walk.).

♂♀, 40–44 mm. Head and body as in *subrasata* Walk. (1861) or slightly paler. Antenna of ♂ slightly serrate, ciliation almost 1. Hindtibial hair-pencil of ♂ well mixed with dark grey (in *tephrosaria* all pale).

*Forewing* of normal width (not narrowed as in the ♂ of *subrasata*), apex minutely produced, termen almost smooth (intermediate in shape towards *amasa* Butl.); rather paler than *subrasata* but less pale than *tephrosaria*; scheme of markings as in the allies ("contigaria Walk." of Hampson, *Faun. Ind. Moths*, iii. 195–6 !!); no costal spots; median shade (as in *subrasata* and *tephrosaria*, but not in others of the group) well beyond the not very large cell-mark; black posterior spot to postmedian line developed in frequent aberrations, as in most of the allies.—*Hindwing* with termen less deeply dentate than in most of the group.

Underside very characteristic, varying little; postmedian line dark, rather thick, well and uniformly developed throughout, on forewing very slightly, on hindwing more strongly crenulate, the band-like rufescent shades just beyond always slight, the irregular dark markings, which in most of the group bound them distally, quite undeveloped.

Sikkim, Bhutan, Assam, Burma, W. China, Formosa, the type ♂ from the Naga Hills, 5,000–6,000 ft. (W. Doherty), in coll. Tring Mus.

This common species has suffered badly from misidentifications. The original description of *tephrosaria* Moore makes it certain that Warren's determination (in coll. Tring Mus.) is approximately correct, and that Moore's claim of a "type" (paratype) in his own collection (belonging to *mitorrhaphes*) is due to a confusion of two allies (cf. under *emphatica*, *supra*). Swinhoe's misidentification of the shorter-winged, banded ♀-form *turpisaria* Walk. (really no doubt the ♀ to the sexually dimorphic *subrasata*) has added to the confusion. The sexes of *mitorrhaphes* are virtually alike, except for the rather broader wings of the ♀.

#### 69. *Nadagara orbipuncta* sp. n.

♂, 34 mm. Head and front of thorax bright brown, but scarcely so ochraceous or tawny as in most of the genus; lower extremity of face mixed with whitish. Thorax and abdomen whitish, the former above more tinged with violaceous, the latter with brown (much as in *vigaia* Walk.). Hindtibia not dilated.

*Forewing* with apex scarcely produced; termen smooth; very pale brown, tinged with fawn, towards termen a little darkened; sparse blackish irroration; cell-dot larger than in the allies, round; antemedian line extremely slender, strongly excurved, tawny-olive; postmedian from SC<sup>4</sup> about 2 mm. from termen, straightish at first but quickly curving to become strongly oblique inward (a trifle less oblique between R<sup>3</sup> and SM<sup>2</sup>), reaching hindmargin at 6.5 mm. out, tawny-olive, blackish-mixed distally, edged distally by a fine white line; terminal

line faintly indicated in grey at apex ; fringe tinged with greyish olive.—*Hindwing* not very broad, termen smooth, faintly sinuous ; costal margin whitish, the rest concolorous with forewing ; cell-dot small ; postmedian line little beyond middle, almost straight, reaching from  $SC^2$  to hindmargin.

Forewing beneath warmer (more cinnamon), more irrorated, the hindmarginal area whitish ; cell-mark elongate, not round ; a postmedian blackish-grey line, posteriorly slightly less oblique than above, not quite reaching hindmargin. Hindwing whitish, strongly irrorated ; cell-dot as above ; postmedian more distal, rather strongly curved.

N.W. India : Dalhousie, July 1891, type in coll. Tring Mus.

Probably nearest *vigaia* Walk. (1862), but with smooth margins, larger cell-dot of forewing, etc. etc.

#### 70. *Nadagara dohertyi* sp. n.

♂, 39 mm. Group of *comprehensata* Walk. and *scitilineata* Walk., but considerably larger. Hindtibial pencil and abdominal spine well developed. General coloration as in the species named.

*Forewing* with apex more produced than even in *scitilineata*, termen rather more crenulate, especially anteriorly ; antemedian rufous line rather distinct, more regularly curved than in the allies ; postmedian less recurved to costa than in *comprehensata* but without the teeth of *scitilineata*.—*Hindwing* with cell-dot less small than in the allies ; postmedian slightly more curved.

Underside rather more uniform than in the allies, more inclining to fleshy or vinaceous, the forewing with less bright admixture of tawny-ochraceous ; the dark irroration about as strong as in *scitilineata* ; black cell-dots distinct ; postmedian indistinct (especially on forewing), slightly crenulate.

Batchian, March 1892 (W. Doherty). Type in coll. Tring Mus.

#### 71. *Nadagara extensipennis* sp. n.

♂, 42–44 mm. Face deep orange-rufous. Palpus not quite 2 ; ochreous mixed with bright ferruginous. Antenna rather long. Vertex, “tegulae” (*in sensu Hampsoniano*), pectus and forecoxa similarly ferruginous—or reddish mixed ; pectus hairy. Foreleg and midfemur tinged with purple ; hindtibia strongly dilated, with hair-pencil. Thorax, abdomen and legs otherwise paler. Abdomen long.

*Forewing* with termen faintly waved ; stalk of  $SC^{1+2}$  anastomosing well with C,  $SC^2$  at a point with  $SC^{3+4}$ ,  $R^2$  arising near  $R^1$ ,  $M^1$  well separate,  $M^2$  rather straight, rather parallel with  $M^1$  ; beneath with a patch of long, specialised scales in the position of the ♀ retinaculum ; ochraceous buff, more or less strongly suffused with vinaceous ; cell-dot black-brown ; lines reddish brown, sometimes weak ; antemedian acutely angled outward in cell ; postmedian wavy or subcrenulate, oblique, posteriorly a little curved, from about five-sixths costa to middle of hindmargin, accompanied distally by a violet-whitish line ; subterminal similar but weaker or nearly obsolete, mostly midway between postmedian and termen, still more oblique inward posteriorly ; terminal line very weak ; fringe more reddish, with whitish line at base and whitish tips.—*Hindwing* with termen gently waved ; cell not quite two-fifths ;  $M^1$  well separate, at base remarkably straight,  $R^3$  curving forward at origin,  $M^2$  at origin rather straight and nearly parallel with  $M^1$  ; cell-dot and lines beyond much as on forewing, the postmedian

almost straight and reaching abdominal margin well behind middle, the sub-terminal bluntly bent at fold, very gently concave in posterior half; fringe as on forewing.

Underside more deeply coloured, in distal area suffused with dull purplish; cell-dots black; a weak dark curved postmedian line, on forewing less oblique than above, on hindwing more distal.

British New Guinea: Kumusi River, low elevation, August 1907 (A. S. Meek), 3 ♂♂ in coll. Tring Mus. Also a more strongly marked form from Rook Island, July 1913, 1 ♂, and Dampier Island, February–March 1914, 1 ♂.

♀♀ from Milne Bay, December 1915 (A. S. Meek), and Eitape, N. Coast of New Guinea, about 90 miles E. of the Dutch border (Mrs. H. Hempsted; kindly presented to the writer by Dr. A. Jefferis Turner) are similar to weakly-marked ♂♂, the abdomen not elongate, the peculiarities of venation less pronounced, the tone more vinaceous.

The unknown ♂ of the smaller and darker, but otherwise similar *argyrosticha* Turn. (1919) will probably show analogous structural peculiarities.

## 72. *Scardamia seminigra* sp. n.

♂, 27–31 mm. Close to *rectilinea* Warr. (Nov. Zool. iii. 127), possibly a seasonal form,<sup>1</sup> labelled by Warren “var. *seminigra*.” On an average smaller. *Forewing* perhaps slightly more rounded; brighter or more reddish orange; postmedian line generally rather thick, slightly less straight than in *rectilinea*, being perceptibly curved towards costa though less markedly than in *metallaria* Guen.; a purple-grey subterminal line more or less strongly developed; terminal spots stronger than in *rectilinea*.—*Hindwing* with similar distinctions in tone, subterminal line and termen.—Both wings beneath more bicoloured, being clearer or brighter yellow proximally to the postmedian, much more suffused with purple distally, only with some yellower dashes in cellules 3 and 6.

N. India: Sikkim, Bhutan and Khasis, the type from Cherrapunji, October 1893, in coll. Tring Mus.

The same or a closely similar form occurs also in the Malay Peninsula (Padang Rengas, Perak and Singapore), and is, in fact, the only member of the group yet known to me from that region.

## 73. *Corymica spatiosa* sp. n.

♂, 34–35 mm.; ♀, 40–45 mm. Larger than *specularia* Moore. Vertex of head white (in *specularia* yellow). Wings rather deeper yellow, more uniform (less clouded with rufescent shades).

*Forewing* broader than in *specularia*, termen with a more noticeable tooth at R<sup>1</sup>; costal margin minutely speckled, but without the spots at origin of lines; these, as in the allies, subobsolete, indicated by dots; blotch at middle of hind-margin rather large and dark; that at tornus thin; terminal cloud greyish, smaller and fainter than in *specularia*, on underside also reduced, though bright reddish.—*Hindwing* considerably broader than in *specularia* and not produced to a sharp point at SC<sup>2</sup> (shaped more as in *vesicularia* Walk.); markings much as in *specularia*.

<sup>1</sup> The only dated specimens before me are from Cherrapunji in 1893, viz. 1 *rectilinea* (April) and 4 *seminigra* (September, October [2] and November); unless one may add a tiny ♂ from Chungking, Szechuan, September 1913 (B. M. Barry), perhaps representing a differentiable race.



Underside paler than in *specularia*, with less rufous clouding; forewing without the rufous median band; hindwing in posterior half predominantly whitish.

N. India: Darjiling (not uncommon) and Khasis; type ♂ from the former locality (F. Möller), in coll. Tring Mus.

#### 74. *Synegia hormosticta* sp. n.

♂, 25 mm. Face yellowish, slightly mixed with red. Palpus scarcely  $1\frac{1}{2}$ , with terminal joint small, not distinct; ochreous. Vertex ochreous. Antenna simple. Thorax cream-buff, in front purplish brown. Abdomen cream-buff, suffused as far as the sixth segment with reddish. Legs mostly pale; a dark spot at end of midtibia.

*Forewing* with costa very gently arched, in middle straight, apex rather blunt, almost rectangular, termen curving to become somewhat oblique;  $SC^1$  free,  $SC^2$  stalked far beyond  $SC^3$ ; retinaculum bar-shaped, slightly broadened with loose scaling; cream-buff, with some cinnamon irroration, here and there beset with minuter blackish irroration; costal margin of the cinnamon shade, irregularly dotted (in costal half spotted) with black; cell-dot black; lines cinnamon; antemedian excurved in cell, then very slightly oblique inward to hindmargin; proximal to it three dark dots on veins; postmedian rather thick, a little diffused distally, commencing at  $SC^4$ , at first scarcely oblique, between  $M^1$  and hindmargin shallowly incurved; a row of dark vein-dots beyond it, that at C confluent with that on  $SC^4$ , those on  $R^1$ ,  $M^1$  and  $SM^2$  slightly enlarged, the last-named connected by an incurved line with that on  $M^2$ ; a slight dark dash (or pair of dots obliquely placed) at apex; a blackish subterminal spot between  $SC^5$  and  $R^1$ ; a larger one between  $R^1$  and  $M^1$ ; a weaker suffusion at hindmargin, nearly reaching  $M^2$ ; fringe pale, with blackish dots at vein-ends. — *Hindwing* with termen rather strongly convex, faintly crenulate between  $SC^2$  and  $R^1$ , then almost smooth; concolorous with forewing; a similar cell-dot; postmedian commencing at abdominal margin about as in *eumeleata* Walk. (= *secunda* Swinh.) but directed more towards apex, about  $R^1$  curving so as to run to costa at least 1 mm. from apex; dots beyond all small; distal area little marked, but with a terminal dash just behind  $SC^2$ ; fringe as on forewing.

Underside similarly marked, but in grey.

Hainan: Wuteryang, May 1903, type in coll. Tring Mus.

#### 75. *Synegia imitaria malayana* subsp. n.

*Forewing* with termen on an average even more oblique than in *i. imitaria* Walk. (Ceylon); the band-like suffusions rather broader, more orange-buff, not or hardly mixed with grey scaling, the blackish element in the postmedian almost entirely wanting; cell-dot similarly less black-mixed and terminal dots less sharp. — *Hindwing* with corresponding distinctions.

Underside slightly more rufescent than in *i. imitaria*, the dark cloudings about equally heavy.

Penang (type and others), Singapore, Borneo, Pulo Laut. Type in coll. Tring Mus.

Slightly intermediate forms from the Khasis and Hainan may provisionally be left with *i. malayana*. All seem to have been confused with *camptogrammaria*

Guen., but the pectinations are slightly longer, costal margin less black, markings more blotchy, postmedian of forewing with lunule at fold deeper.

#### 76. *Synegia medionubis* sp. n.

♂♀, 27–30 mm. Closely similar to *suffusa* Warr. (1893). Palpus more or less dark-mixed. Antenna in ♂ with the pectinations still longer; in ♀ also strongly pectinate (in that of *suffusa* simple).

*Forewing* rather stumper; cell on an average slightly longer;  $SC^{1+2}$  long-stalked, their stalk anastomosing strongly with C,  $SC^3$  afterwards with  $SC^{3+4}$ ; more variegated (the reddish irroration less regularly distributed); median shade much less oblique, passing much nearer to the cell-dot, accompanied distally in middle of wing by an extended, though ill-defined, dark cloud; a rather conspicuous clear yellow spot between  $M^2$  and  $SM^2$  just beyond the postmedian.—*Hindwing* with only the subbasal and subterminal bands much mixed with dark violet-grey (in *suffusa* often also an ante- and a postmedian); otherwise much like a variegated *suffusa*.

Assam: Naga Hills, 1,500 ft., September–October 1889 (W. Doherty), 2 ♂♂, 1 ♀ (including type); Cherrapunji, November–December 1893; Digboi. Type in coll. Tring Mus.

#### 77. *Nothomiza rectangula* sp. n.

♂♀, 35–40 mm. Near *costalis* Moore (1867) in structure and coloration. Face orange-yellow, above and below mixed with red.

*Forewing* relatively much shorter than in *costalis*, broader, the termen nearly straight and scarcely oblique; ground-colour as in the more greyish-suffused forms of that species; yellow costal projections rather shorter and flatter (less triangular); antemedian line obsolete; a yellow spot or dot in cell just in front of  $M^2$ ; postmedian represented by a larger yellow spot between  $R^3$  and  $M^1$  and occasionally a small one behind it (on  $M^2$ ); termen without anterior yellow streak; a purple terminal line, in places very slightly encroaching on fringe; fringe yellow.—*Hindwing* broader than in *costalis*, with termen rather more convex, in the ♀ appreciably bent in the middle; costal area less white; the diffuse grey line rather more proximal than in *costalis*; terminal line and fringe as on forewing.

Underside buff to ochreous, with short purplish strigulae and distal suffusion.

South China: Hong-Kong 1 ♂ (type), 3 ♀♀; North River, 1 ♂, 1 ♀. All in coll. Tring Mus., collected by E. Wahr.

Both the ♂♂ have unfortunately lost their antennae, but the stumps are simply ciliated.

#### 78. *Nothomiza flaviordinata* sp. n.

♂, 28 mm. Face reddish. Vertex yellow. Collar mixed with reddish. (Antennae lost.) Thorax and abdomen concolorous with wings.

*Forewing* not broad, costa a little arched distally, apex not produced, termen not oblique anteriorly, bent (curved) in middle, becoming markedly oblique; vinaceous, very pale except anteriorly and distally; costal margin broadly chrome yellow, with bluntly triangular projections (about equal in size) before and beyond middle; base with slaty suffusion; a straight, strongly oblique line from distal edge of first costal projection to hindmargin at 2.5 mm.; a small

terminal yellow mark between apex and  $R^3$ , attenuated at both ends (larger than that of *costalis* Moore).—*Hindwing* paler, rather broadly white anteriorly; abdominal margin with beginnings of two lines, near base and about 3 mm. from termen.

Underside pale, almost unmarked, except for the yellow (likewise pale) areas of forewing.

Hainan: Mount Wuchi, May 1903. Type in coll. Tring Mus.

Near *xanthocolona* Meyr. (1897), paler—especially the hindwing—hindwing more rounded (as in *formosa* Butl., 1878), the line of forewing arising from the first costal tooth. Perhaps nearer *flavicosta* Prout (1914), though narrower and much paler and with the costal yellow reduced.

#### 79. *Ingena chrotodon* sp. n.

♂, 32 mm. Face dark brown. Palpus brown, slightly varied. Antennal ciliation nearly 1 proximally, gradually becoming shorter, minute distally. Vertex, thorax and abdomen concolorous with wings.

*Forewing* violet-grey, much as in the allies, with scattered red-brown speckling; costal margin red-brown, with dark spots; a small black cell-dot; lines dark red-brown; antemedian slight, anteriorly obsolete, forming a dot on M and a sinuous mark behind; median placed far beyond the cell-dot, very near the postmedian, sinuous, slightly edged with ochreous; postmedian edged with ochreous, especially proximally, acutely dentate outward on the veins, deeply incurved between, the sinus between  $R^1$  and  $R^3$  deep, with only a very short tooth at  $R^3$ , the tooth on  $M^2$  reaching nearest to the termen, the submedian sinus again deep; subterminal very thin, slightly interrupted, sinuous; a fine dark terminal line; fringe somewhat leaden at base, then paler and browner.—*Hindwing* somewhat lighter in distal area anteriorly; no cell-dot or antemedian line; the rest much as on forewing.

Underside pale grey, with an ill-defined, gently sinuous whitish subterminal band, accompanied proximally by a faintly darkened shade.

Selangor: Kuala Kubu, Bukit Kutu, 3,400 ft., August 1915, 3 ♂♂. Type in coll. Brit. Mus., paratypes in coll. Fed. Malay States Mus. et coll. L. B. Prout.

Near *I. undilineata* Butl. (*Proc. Zool. Soc. Lond.* 1892, p. 132, pl. vi, fig. 10), but with a cell-dot, less white-mixed, lines more variegated, first and third more proximal (in *undilineata* nearly evenly spaced), first more broken, median zigzag, subterminal interrupted, underside less brownish, more weakly marked.